UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION
WASHINGTON, D.C.

FULL FUNDING GRANT AGREEMENT

NEW JERSEY TRANSIT CORPORATION

PORTAL NORTH BRIDGE CORE CAPACITY PROJECT

NJ-2021-001-00

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UNITED STATES OF AMERICA
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FULL FUNDING GRANT AGREEMENT

On the date the authorized U.S. Department of Transportation, Federal Transit Administration (FTA) official signs this Full Funding Grant Agreement, the Government (FTA) has awarded Federal assistance in support of the Project described below. Upon Execution of this Full Funding Grant Agreement by the Grantee named below, the Grantee affirms this Award by the Government (FTA Award), and enters into this Full Funding Grant Agreement with FTA. The following documents are incorporated by reference and made part of this Full Funding Grant Agreement:

(1) "Federal Transit Administration Master Agreement," FTA MA(27), October 1, 2020
(2) The Certifications and Assurances applicable to the Project that the Grantee has selected and provided to FTA; and
(3) Any FTA Award notification containing special conditions or requirements, if issued.

FTA AWARD

The Government (FTA) hereby awards a Full Funding Grant as follows:

Project Number(s): NJ – 2021 – 001 – 00

Grantee: New Jersey Transit Corporation (NJ TRANSIT)

Citation of Statutes Authorizing the Project: 49 U.S.C. §§ 5309(b), 5309(e), 5309(q)

Estimated Net Project Cost: $1,732,168,451

Maximum FTA Amount Awarded: $823,563,562

Amount of This FTA Award: $248,000,000

Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution: $766,500,000

Maximum Percentage of FTA Participation: 47.6 percent

Maximum Percentage of Section 5309 Capital Investment Grants Program Participation: 44.3 percent

Special Conditions: Grantee shall provide evidence to FTA, in a timely manner, of the recording of the deed referenced in Section 5.2, Section 20.a, and Exhibit 3 of the Portal North Bridge Project Development Agreement (PDA) between NJ TRANSIT and the National Railroad Passenger Corporation (Amtrak), executed on November 27, 2020. To the extent that any transfer of real property, retention of easements and, or transfer of Project Improvements referenced in Section 5.2 and Section 20.a of the PDA will occur in a manner that is inconsistent with such provisions of the PDA, NJ TRANSIT shall obtain approval from FTA prior to such transfer.

Dates of U. S. Department of Labor Certifications of Transit Employee Protective Arrangements:

Original Project or Amendment Numbers:	Certification Dates:
NJ-2021-001-00	XXX, XX, XXXX
NJ-2021-001-00	XXX, XX, XXXX

Required Completion Date: June 30, 2028

Project Description:

The Portal North Bridge Core Capacity Project (Project) replaces the existing 110-year-old two-track railroad swing bridge over the Hackensack River, with a new fixed bridge carrying two (2) new tracks. The segment of the bridge that will span directly above the river will consist of three (3), 400 foot-long "Network Tied Arch" spans, equaling a distance of about 1,200 feet. In total, the Project's 2.44 miles consist of approximately 6,200 linear feet of new railroad embankment sections and approximately 6,700 linear feet of bridge and viaduct structure sections. The related project components are voluminous and include items such as structural, track, civil, communications, signals, electric traction power, facilities power, catenary, and control center modifications. For a more detailed description of the Project see Attachments 1 and 2.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

FULL FUNDING GRANT AGREEMENT TERMS AND CONDITIONS

THIS FEDERAL TRANSIT ADMINISTRATION FULL FUNDING GRANT AGREEMENT (Agreement) is entered into by the New Jersey Transit Corporation, a public instrumentality of the State of New Jersey (NJ TRANSIT or Grantee) and the United States of America, acting through the United States Department of Transportation, Federal Transit Administration (FTA or Government).

WHEREAS, the Grantee has determined through the local planning process that construction and implementation of the Portal North Bridge Project (PNB or Project) will effectively and efficiently serve the transportation needs of the State of New Jersey.

WHEREAS, the Grantee has developed a Financial Plan, as herein defined, using a combination of local and Federal funds to finance the costs of the Project and, in accordance with its plan, has requested a Grant, as herein defined, of Federal financial assistance in the Project.

WHEREAS, the Government has determined to enter into this Agreement and to support final design and construction of the Project up to a Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution of $766,500,000 subject to all the terms and conditions set forth in this Agreement.

WHEREAS, the Grantee has submitted its request for Federal assistance (the Application) and the Government has received and is relying upon the Grantee's assurances, certifications, and all other documents required as conditions precedent to a Grant of assistance by the Government for the Project; and, in its submissions, the Grantee has demonstrated justification for the Project, has demonstrated its financial, organizational, legal, and technical capacity as is necessary to Complete the Project within the maximum amount of Federal assistance set forth in this Agreement, and has demonstrated the capability to secure non-Federal funds as may be necessary for such completion.

WHEREAS, the Government has determined that the Project is justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, economic development effects, the capacity needs of the Northeast Corridor, and congestion relief; and the Project is supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to construct, maintain, and operate the Project.

WHEREAS, the Government and the Grantee have agreed that their respective duties and responsibilities as related to the completion of the Project shall be determined by and under the terms and conditions of this Agreement and have agreed that this Agreement shall be recognized as the sole understandings between the Government and the Grantee in consideration of the mutual promises as set forth in this Agreement.

THEREFORE, in consideration of the above and the parties' mutual promises as set forth in this Federal Transit Administration Full Funding Grant Agreement, the Grantee and the Government agree to the specific terms, conditions and provisions set forth in this entire Agreement including, in particular, the specific terms of the following Sections and Attachments:

SECTION 1. DEFINITIONS

"Agreement" means this Federal Transit Administration Full Funding Grant Agreement (FFGA) and consists of all parts and documents listed in Section 20 of this Agreement, "Contents of Agreement," and will include all future addenda, substitutions, modifications and amendments as and when legally executed and effective. (This definition supersedes the definition of "Grant Agreement" set forth in Section 2.a of the Federal Transit Administration Master Agreement (Master Agreement), incorporated by reference and made part of this Agreement.)

"Application" means those documents and written submissions filed by or on behalf of the Grantee pursuant to its request for Federal financial assistance for support of the Project and relied upon by the Government as satisfaction of the legal and policy requirements of Grant award. The Application includes all explanatory, supporting, or supplementary documents related to the Project that the Government relied upon in its determination to obligate and award Federal funds for the Project. (This definition is intended to supplement the definition "Application" set forth in Section 2.a of the Master Agreement, incorporated by reference and made part of this Agreement.)

"Baseline Cost Estimate" means the Application document described in Section 13 of this Agreement and set forth in the Tables that comprise Attachment 3. The requirements of the Baseline Cost Estimate are set forth in FTA Circular 5200.1A. "Full Funding Grant Agreements Guidance," as may be revised from time to time. The Baseline Cost Estimate reflects the total anticipated cost of the Project as of the Date of this Agreement.

"Complete the Project" means to accomplish all of the scope and activities of the Project as described in Attachment 1, "Scope of the Project," and Attachment 2, "Project Description."

"Date of this Agreement" means the date the Government awards this Full Funding Grant Agreement.

"Estimated Net Project Cost" means the amount that is calculated by subtracting the cost that can reasonably be financed from the Grantee's revenue from the total anticipated cost of the

Project as reflected in the "Baseline Cost Estimate," Attachment 3. The Estimated Net Project Cost is set forth in Section 7 of this Agreement.

"Financial Plan" means the plan accepted by the Government as part of the Application process describing the Grantee's financial condition and capability to complete the Project and to maintain and operate the Project together with its existing transit system. It includes all explanatory, supporting and supplementary documents, commitments, and agreements accepted or approved by the Government.

"Government" means the United States of America, acting through the Federal Transit Administration of the United States Department of Transportation.

"Grantee" means the New Jersey Transit Corporation, a public instrumentality of the State of New Jersey (NJ TRANSIT).

"Grant(s)" means, in singular and plural forms, the obligation and award of Federal financial assistance by the Government pursuant to the laws codified at 49 U.S.C. Chapter 53.

"Increased Levels of Service" means the additional service to be provided upon completion of the project as set forth in Attachment 1, "Scope of the Project."

"Local Share" means that portion of the Grantee's local financial commitment that is the Grantee's legally required share of the Net Project Cost.

"Master Agreement" means the standard terms and conditions applicable to recipients of Federal financial assistance from the Government. It is updated and published annually. It is incorporated by reference and made part of this Agreement and identified in Federal Fiscal Year 2021 by FTA Form MA(27) (October 1, 2020).

"Maximum Federal Section 5309 Capital Investment Grant Program Financial Contribution" means the limit of Federal Section 5309 Capital Investment Grants Program financial participation in the Project. (The amount of the "Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution" is set forth in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment," and is only a portion of the total Federal financial contribution for the Project.)

"Maximum FTA Amount Awarded" means the total amount of Federal funds from all sources administered by FTA and awarded for the Project, regardless of source, and available to the Grantee. (This amount is set forth in the first page of this Agreement.)

"Net Project Cost" means the cost of the Project that cannot reasonably be financed from the Grantee's revenues.

"Project" means the transit/transportation improvements the Grantee has promised to implement as a condition of its Full Funding Grant. A description of the Project is set forth in Attachment 1, "Scope of the Project." Activities to carry out the project scope are set forth in Attachment 2, "Project Description."

"Project Costs" means all costs eligible for Federal financial participation under the terms of this Agreement and consistent with the cost principles set forth in Section 7 of the Master Agreement, "Payments to the Recipient."

"Recovery Plan" means a plan developed by the Grantee, and accepted by the Government, whereby the Grantee will take every reasonable measure to minimize any delay in achieving the baseline schedule set forth in Attachment 4 to this Agreement (the Baseline Schedule) and eliminate or otherwise mitigate [recover] any increase in the total Project cost as currently estimated, as compared to the total Project cost identified in Attachment 3 to this Agreement (the Baseline Cost Estimate).

"Required Completion Date" means the date certain upon which the Grantee agrees to accomplish the activities and tasks described in Attachments 1 and 2 to this Agreement and begin providing the additional service in the corridor as identified in the application submitted to FTA.

SECTION 2. PURPOSES OF AGREEMENT

Pursuant to 49 U.S.C. § 5309, the purposes of this Agreement are to:

(a) provide Federal financial assistance to the Grantee in the form of this Full Funding Grant and possible future awards of financial assistance as contemplated under this Agreement, not to exceed the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution for the Project, as is and may be awarded under this Agreement and the laws codified at 49 U.S.C. Chapter 53 for purposes that are consistent with those statutes, implementing regulations, and other applicable laws and regulations;

(b) describe the Project and set forth the mutual understandings, terms, conditions, rights and obligations of the parties related to implementing the Project, the future management and operation of the Project, and the manner in which Project real property and equipment will be used;

(c) establish the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution for the Project, and the manner in which all future Federal funds for the Project, if any, will be awarded and released to the Grantee;

(d) establish the Grantee's financial commitment to the Project including its obligation to fund the Local Share, its obligation to Complete the Project with a specified amount of Federal assistance, its obligation to begin providing the additional service in the corridor by a specified date, its obligation to pay all costs necessary to Complete the Project that are in excess of the

Estimated Net Project Cost and its obligation to finance the future maintenance and operational costs of the Project; and

(e) facilitate timely and efficient management of the Project.

SECTION 3. PREVIOUS FEDERAL DOCUMENTS AND GRANTS

(a) Federal law, policies and procedures require the completion of a project development process and environmental and historical preservation review prior to the Award and Execution of this Agreement. Prior Grants of Federal funds for these reviews and other project activities are described in Attachment 5 to this Agreement. These Grants (and any other previous documents identified in Attachment 5, including Letters of No Prejudice) are incorporated by reference and made part of this Agreement, except for the terms and conditions thereof specifically superseded by this Agreement. Further, in executing this Agreement, the Grantee assures the Government that the Certifications and Assurances made by the Grantee (or on behalf of the Grantee by a third party) upon which the Government relied in these prior actions were made to the Government in good faith and to the best of the Grantee's knowledge and belief, and that the Grantee has no present knowledge of facts or circumstances substantially affecting the continued validity of these Certifications and Assurances that the Grantee has not formally conveyed to the Government prior to the Government's Award of funding set forth in this Agreement.

(b) This Agreement does not discharge or rescind any of the terms, conditions, or obligations established under the documents set forth in Attachment 5 unless specifically stated otherwise herein. Furthermore, the terms, conditions and obligations of this Agreement take precedence over the provisions of all prior agreements between the Government and the Grantee related to the Project and will be controlling for all actions related to the Project taken after the Date of this Agreement, unless specifically stated otherwise herein.

(c) No amendments will be sought or approved to increase the amount of funds in the prior Grants listed in Attachment 5 beyond the amounts described in this Agreement as available to the Project.

SECTION 4. OBLIGATION TO COMPLETE THE PROJECT

(a) The Government has no obligation to provide any financial assistance for the Project beyond the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution. If the total Federal funding provided under Section 8 of this Agreement, "Limitations of the Federal Funding Commitment," is insufficient to undertake the activities necessary to Complete the Project and increase levels of service, the Grantee agrees to Complete the Project and accepts sole responsibility for the payment of any additional costs (overruns).

(b) If at any time during its efforts to Complete the Project the Grantee determines that the total Project cost will exceed the Baseline Cost Estimate, the Grantee must immediately notify

the Government of the amount of the difference and the reasons for the difference. Further, the Grantee must provide the Government with a Recovery Plan that demonstrates the Grantee is taking and will take every reasonable measure to eliminate [recover] the difference between the total project cost and the Baseline Cost Estimate. Insofar as any difference between the total project cost and the Baseline Cost Estimate that cannot be eliminated [recovered], the Grantee must secure and provide such additional resources as are necessary to meet the additional costs and expeditiously Complete the Project without further financial assistance from the Federal Section 5309 Capital Investment Grants Program. Further, in its Recovery Plan, the Grantee must identify the sources of funds it will draw upon to meet the additional costs and cover the difference between the total Project cost and the Baseline Cost Estimate.

SECTION 5. REQUIRED COMPLETION DATE AND INCREASED LEVELS OF SERVICE

(a) The Grantee agrees and promises to Complete the Project on or before June 30, 2028 the Required Completion Date, in accordance with the terms and conditions of this Agreement.

(b) The Required Completion Date is a significant term of this Agreement. The Grantee's failure to complete the Project on or before the Required Completion Date will constitute a breach of this Agreement. Upon the Grantee's request, the Government may determine, at its sole discretion, to waive a breach or an anticipatory breach of this Agreement and to extend the Required Completion Date if there is an unavoidable delay resulting from an event or circumstance beyond the control of the Grantee, or if the Government determines that allowing the delay is in the best interest of the Government and the success of the Project. Requests by the Grantee for waiver of a breach or anticipatory breach of this Agreement and extension of the Required Completion Date for the reasons set forth herein shall be submitted promptly (with appropriate documentation) to the Government. In the exercise of its discretion to waive the breach and extend the Required Completion Date, the Government will take into consideration the actions and measures taken by the Grantee to ensure adherence to its promise to complete the Project on or before the scheduled Required Completion Date.

(c) Delays in appropriations of funds from Congress shall not constitute a basis for extension of the Required Completion Date.

(d) The Government's consent to extend the Required Completion Date pursuant to Paragraph (b) of this Section 5 does not constitute a basis for additional Federal financial assistance beyond the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution.

(e) Set forth in Attachment 1 to this Agreement, "Scope of the Project," is the Increased Levels of Service the Grantee indicated would be provided in the peak-hour in the peak-direction in the Project corridor to qualify for Section 5309 Capital Investment Grants Program funding. The Grantee will achieve and maintain these Increased Levels of Service once the Project is complete and for no less than five years thereafter. These specified Increased Levels of Service are a significant term of this Agreement. The Grantee's failure to achieve and

maintain these Increased Levels of Service at the Required Completion Date and for five years thereafter will constitute a breach of this Agreement. Upon the Grantee's request, the Government may determine in its sole discretion to waive a breach of the Grantee's obligation to maintain these specified Increased Levels of Service for events or circumstances beyond the control of the Grantee, or if the Government determines that a waiver is in the interests of the United States. In the exercise of its discretion whether to waive a breach of the specified Increased Levels of Service, the Government will take into consideration the actions and measures taken by the Grantee to achieve and maintain the operational goals of the Project and the Grantee's entire public transportation system for at least five years beyond the completion of the Project.

SECTION 6. NET PROJECT COST

(a) This Grant is to assist in the payment of actual eligible costs within the scope of the Project under this Agreement, minus any amount that can reasonably be financed from revenues of the Grantee. If the funds awarded under this Grant exceed the amount necessary to finance the Federal share, those excess funds are not available to the Grantee for payment of costs beyond the scope of this Project supported by this Grant.

(b) In accordance with the FTA Master Agreement, a refund or reduction of the Grantee's Local Share of the Net Project Cost requires a refund to the Government of a proportional amount of the Federal financial assistance provided under this Agreement.

(c) The portion of the Net Project Cost that may be financed by the Government with Section 5309 Capital Investment Grants Program funds may not exceed the amount of the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution for this Project as stated in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment."

(d) The Grantee acknowledges that Federal funds may be used only to reimburse eligible expenses for the Project. Should FTA determine that Federal funds have been used to reimburse any expenses that were ineligible for Federal reimbursement, FTA will direct the Grantee either to reimburse FTA with local funds not already committed to the Project or to reduce the total project costs by the amounts found to have been ineligible.

SECTION 7. ESTIMATED NET PROJECT COST

(a) The Government's determination to provide financial assistance for the Project is based, in significant part, upon the Grantee's estimated costs as set forth in the "Baseline Cost Estimate," Attachment 3 to this Agreement. The Estimated Net Project Cost reported in Attachment 3 is $1, 732,168,451.

(b) The Estimated Net Project Cost financed with the Execution of this Agreement is limited by the amount of the Maximum FTA Amount Awarded. The amount of the Estimated Net Project Cost and the amount of the Maximum FTA Amount Awarded are stated in the first page of

this Agreement. The amount reimbursable by the Government is limited to the lesser of either the amount of the Maximum FTA Amount Awarded or the maximum percentage of FTA participation permitted by Federal law and regulations. Additional funds will not be provided until a Grant amendment awarding additional funds and amending this Full Funding Grant Agreement is executed.

SECTION 8. LIMITATIONS OF THE FEDERAL FUNDING COMMITMENT

(a) With its Award set forth in this Agreement, the Government obligates $248,000,000 in Federal Section 5309 Capital Investment Grants Program financial assistance for the Project. The sources of this Federal financial assistance are set forth in the "Project Budget," Attachment 3A. These funds are in addition to all previous Federal financial commitments to the development of the Project as set forth in the schedule of "Prior Grants and Related Documents." Attachment 5 of this Agreement.

(b)(1) With its Award set forth in this Agreement, the Government also acknowledges its intent to provide Federal Section 5309 Capital Investment Grants Program financial assistance for the Project in addition to the amount set forth in Paragraph (a) of this Section 8. The amount of additional Section 5309 Capital Investment Grants Program funds the Government may provide will not exceed $518,500,000. The anticipated sources of Federal financial assistance in this amount are listed in Attachment 6 to this Agreement, “Schedule of Federal Funds for the Project." Additional funds obligated pursuant to this Paragraph will be subject to all the terms, conditions and obligations established by this Agreement. Accordingly, it is expected that the award of funds will be processed through amendments to this Agreement.

(b)(2) The award by the Government of additional Federal Section 5309 Capital Investment Grants Program financial assistance to the Project under Paragraph (b)(1) of this Section 8 is subject to the following limitations:

(i) the availability of appropriated funds, and

(ii) the Grantee's continued performance under the terms and conditions of this Agreement.

(c) The Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution for this Project is limited to $766,500,000, which is the sum of the amounts set forth in Paragraphs (a) and (b)(l) of this Section.

SECTION 9. FEDERAL FUNDING—OTHER SOURCES

The Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution specified in Section 8(c) of this Agreement does not include funds other than from the Capital Investment Grants Program under 49 U.S.C. Chapter 53. Should such other Federal funds be provided for the Project in addition to the Federal Section 5309 Capital

Investment Grants Program funds set forth in Attachment 6 of this Agreement, the limitation on the Federal funding commitment set forth in Section 8 of this Agreement shall not apply to those funds. Accordingly, such additional funds shall be excluded from the calculation of the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution. Funds awarded pursuant to this Section will be subject to all other terms, conditions and obligations set forth in the Agreement.

SECTION 10. LOCAL FINANCIAL COMMITMENT—CAPITAL COSTS

(a) As a condition of the Government's Award of this Full Funding Grant, the Grantee has developed and adopted a Financial Plan for financing all Project Costs necessary to complete the Project. In addition to the amount of Federal funds requested, the Financial Plan includes a statement identifying the local and private sources of funding and the amount of funds available for and committed to the Project from each such source. This Financial Plan, as accepted by the Government, with the supporting documentation (including formal funding agreements and commitments) is hereby incorporated by reference and made part of this Agreement.

(b) The Grantee hereby commits and certifies that it will provide funds in an amount sufficient, together with the Federal contribution (acknowledging the limitations as set forth in this Agreement), to assure timely and full payment of the Project Costs as necessary to Complete the Project.

(c) The Grantee hereby commits and certifies that the Local Share portion of its financial commitment will be provided from funding sources other than Federal funds (except as may otherwise be authorized by Federal statute), receipts from the use of Project facilities or equipment (except as otherwise be authorized by Federal statute), or revenues of the public transportation system in which such facilities or equipment are used.

(d) Given the Estimated Net Project Cost, as set forth in Section 7 of this Agreement, the Grantee's financial commitment to the Net Project Cost is estimated to total $908,604,889. This amount constitutes the Local Share needed to match the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution for the Project and Other Federal Sources. In the event that the actual Federal financial contribution for the Project is reduced or is increased, or the funding percentage as set forth in this Agreement is changed, the portion of the Grantee's financial contribution for the Project that is identified as Local Share shall be adjusted accordingly.

(e) The Grantee agrees to notify the Government of any change in circumstances or commitments that adversely affect the Grantee's plan to fund the Project Costs necessary to Complete the Project as set forth in the Financial Plan. In its notification, the Grantee shall advise the Government of what actions it has taken, or plans to take, to ensure adequate funding resources and shall reaffirm its commitment to the Government as set forth in Paragraph (b) of this Section 10.

SECTION 11. AUTHORIZATION TO ADVANCE PROJECT WITHOUT PREJUDICE

The Grantee may incur costs or expend local funds for all phases of the Project as is reasonably necessary to advance the Project prior to an award of Federal funding assistance without prejudice to possible future Federal participation in or reimbursement of the Project Costs to the extent that such costs are incurred in accordance with all applicable Federal requirements and this Agreement. It is understood that the authority conferred on the Grantee to advance the Project without prejudice does not constitute a legal commitment by the Government to obligate and award Federal funds.

SECTION 12. LOCAL FINANCIAL COMMITMENT—OPERATING AND MAINTENANCE COSTS

(a) As a condition of the Government's Award of funding set forth in this Agreement, the Grantee has developed and adopted a Financial Plan to finance the future operation and maintenance of the Project that also takes into consideration the Grantee's continuing financial responsibilities to operate, maintain and reinvest in its existing transit system. This Financial Plan, as accepted by the Government, and the supporting documentation (including specific funding commitments) evidencing stable and dependable funding sources are an essential part of the Grantee's Application and are made part of this Agreement by incorporation of the Application.

(b) With the Execution of this Agreement, the Grantee assures that it has stable and dependable funding sources, sufficient in amount and in degree of commitment, to operate and maintain its entire mass transportation system at an adequate and efficient level of service, including the future operation and maintenance of the Project without additional Federal assistance beyond the amounts set forth in the Financial Plan. The foregoing assurance does not preclude the Grantee from altering service through contracts with private providers of mass transportation services.

(c) The Grantee will notify the Government of any change in circumstances or commitments that adversely affects the Grantee's plan to fund the maintenance and operating costs of the Project as set forth in the Financial Plan. In its notification, the Grantee will advise the Government of actions it has taken or plans to take to ensure adequate funding resources and will reaffirm to the Government its assurance as set forth in Paragraph (b) of this Section.

SECTION 13. BASELINE COST ESTIMATE

(a) In its Application, the Grantee submitted to the Government a Baseline Cost Estimate for the activities constituting the Project. The Baseline Cost Estimate is accepted by the Government and is set forth in the Tables that comprise Attachment 3 of this Agreement. The Baseline Cost Estimate is derived from cost estimates of the individual third party contracts and force account work that, in sum, constitute the Project; it reflects appropriate escalation and Project schedule dates.

(b) The Government intends to use the Baseline Cost Estimate to monitor the Grantee's compliance with certain terms and conditions of this Agreement. The Baseline Cost Estimate established in Attachment 3 serves as the measure of cost estimates as of the Date of this Agreement, and will not be amended or modified during the implementation of the Project.

(c) The Grantee will submit cost reports on the implementation of the Project as required by this Agreement and in a format consistent with the units set forth in the Baseline Cost Estimate so that the Government can, with reasonable diligence, reconcile the Grantee's reports with the Baseline Cost Estimate.

SECTION 14. BASELINE SCHEDULE

(a) In its Application, as approved, the Grantee submitted a Baseline Schedule for the Project that demonstrates how the Grantee intends to implement the Project and meet the Required Completion Date. This "Baseline Schedule" has been accepted by the Government and is Attachment 4 of this Agreement.

(b) The schedule for the Project may be modified from time to time at the discretion of the Grantee. However, the Baseline Schedule is not to be modified because it is to be used as a basis for comparing planned to actual project implementation. The Grantee will notify the Government when a Project schedule modification has the potential to change the Required Completion Date and describe the actions planned to recover the schedule. The Government's acquiescence in such notice will not be deemed approval by the Government of an extension of a Required Completion Date unless the Government expressly grants an extension in writing.

SECTION 15. PROJECT MANAGEMENT OVERSIGHT

The Project is a "Major Capital Project" as defined in FTA' s Project Management Oversight regulations at 49 C.F.R. § 633.5. Accordingly, the Grantee agrees that all requirements and conditions set forth in the rule at 49 C.F.R. Part 633 apply to the Project activities. Noncompliance with any regulatory requirements shall constitute a breach of this Agreement, unless the Government formally waives the regulatory requirement.

SECTION 16. ENVIRONMENTAL PROTECTION

(a) As a condition precedent to this Agreement, the environmental impacts of the Project have been assessed as required by law. The results of that assessment and the adopted mitigation measures are described in the environmental documents identified in Attachment 7 of this Agreement. These documents together with related agreements and supporting documentation are incorporated by reference and made part of this Agreement. To assist the Government in monitoring the implementation of the adopted mitigation measures, these measures are specifically referenced in Attachment 7 of this Agreement. It is understood and agreed that the description in Attachment 7 shall not supersede or in any way result in a circumvention of the requirements set forth in the Government's environmental record for the Project.

(b) Certain terms and conditions of this Agreement as related to the Grantee's responsibility to ensure protection of the environment are set forth in Section 26 of the Master Agreement, "Environmental Protections." Under Subsection 26.i, "Mitigation of Adverse Environmental Effects," the Grantee is required, among other actions, to undertake all environmental mitigation measures that are identified in environmental documents prepared for the Project. Accordingly, the Grantee understands that it shall not withdraw or substantially change any of the adopted mitigation measures as described in the Government's environmental record for the Project without the express written approval of the Government.

(c) This Section is intended only to supplement the provisions set forth in Section 26 of the Master Agreement, "Environmental Protections."

SECTION 17. LABOR PROTECTION

The Grantee will carry out the Project in conformance with the terms and conditions determined by the Secretary of Labor to be fair and equitable to protect the interests of employees affected by the Project and meet the requirements of 49 U.S.C. § 5333(b) and U.S. Department of Labor (USDOL) Guidelines at 29 C.F.R. Part 215. These terms and conditions are identified in the letters of certification from USDOL on the dates set forth on the first page of this Agreement. The Grantee will carry out the Project in compliance with the conditions stated in the USDOL certification letters. Those letters and any documents cited therein are incorporated by reference and made part of this Agreement.

SECTION 18. GOVERNMENT ACTIONS

(a) In all cases where the Government's review, approval or concurrence is required under the terms and conditions of this Agreement, the Government will provide its response within sixty (60) calendar days of receipt from the Grantee of all materials reasonably necessary for the formulation of the Government's response.

(b) If the Government determines that its position cannot be finalized within that sixty (60) day period, the Government will notify the Grantee, in writing, within thirty (30) days following receipt of the Grantee's submission that the Government's response will be delayed and advise the Grantee of the Government's anticipated time period for response.

(c) Whenever the Government's approval or concurrence is needed on any matter pertaining to or concerning this Agreement, the Government's approval or concurrence will not be unreasonably withheld.

SECTION 19. REMEDIES

(a) Substantial failure of the Grantee to Complete the Project in accordance with the Application and this Agreement will be a default of this Agreement. In the event of default, the Government will have all remedies at law and equity, including the right to specific performance without further Federal financial assistance, and the rights to termination or

suspension as provided by Section 11 of the Master Agreement, "Right of the Federal Government to Terminate." The Grantee recognizes that in the event of default, the Government may demand all Federal funds provided to the Grantee for the Project be returned to the Government. Furthermore, a default of this Agreement will be a factor considered before a decision is made with respect to the approval of future Grants requested by the Grantee.

(b) Under the provisions of Section 15 of this Agreement, "Project Management Oversight," and under the terms and conditions of the Master Agreement, the Government will review performance by the Grantee to determine whether satisfactory progress is being made to complete the Project. In the event that the Government determines that the Grantee is in breach of this Agreement, the Government may withhold its approvals of further funding and suspend drawdown of funds, under the provisions of Section 11 of the Master Agreement, "Right of the Federal Government to Terminate," until any necessary corrective action, which may be required by the Government, is accomplished. Any breach of this Agreement that is not corrected within a reasonable period of time will be a default of this Agreement. The Government in its discretion may permit the cost of such corrective action to be deemed a Project Cost, provided that such cost is an allowable cost under the requirements of Section 7.b of the Master Agreement, "Eligible Costs," and so long as it remains within the limits of the Maximum Federal Section 5309 Capital Investment Grants Program Financial Contribution set forth in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment."

(c) In the event of a breach of this Agreement by the Grantee and before the Government takes action contemplated by this Section, the Government will provide the Grantee with ninety (90) days written notice that the Government considers that such a breach has occurred and will provide the Grantee a reasonable period of time to respond and to take necessary corrective action.

SECTION 20. CONTENTS OF AGREEMENT

This Full Funding Grant Agreement consists of the text of this Agreement, which includes the first pages setting forth significant characteristics of the Agreement (such as the maximum Federal funds obligated and awarded for expenditure on the Project and the funding ratio of Federal and local funds to be expended for the Project, and such other data), followed by the Terms and Conditions and the Attachments to the Agreement. The Agreement also includes the following documents incorporated by reference and made part of this Agreement: the "Federal Transit Administration Master Agreement," FTA Form MA(27) (October 1, 2020) as may be revised from time to time, the Application, the Government's environmental record for the Project, related agreements, and prior Grant Agreements for the Project referenced in Attachment 5 of this Agreement. Should the FTA Award notification include special conditions for the Project, that notification is incorporated by reference and made part of this Agreement. Any inconsistency between the Application and the terms and conditions of this

Full Funding Grant Agreement will be resolved according to the clear meaning of the provisions of this Agreement and Attachments hereto.

SECTION 21. SIMULTANEOUS CREATION OF AGREEMENT IN ELECTRONIC FORMAT

Simultaneous to the Award and Execution of this Agreement set forth in typewritten hard copy, the Agreement is being awarded and executed by electronic means through FTA's electronic award and management system. To the extent any discrepancy may arise between the typewritten version and the electronic version of this Agreement, the typewritten version will prevail. Should any special conditions or requirements for the Project be added separately in the electronic version, those conditions or requirements are incorporated by reference and made part of this Agreement.

SECTION 22. AMENDMENTS TO AGREEMENT

Amendments to any of the documents referenced in Section 20, "Contents of Agreement," will be made in accordance with the requirements and procedures set forth in FTA Circular 5010.1E, "Award Management Requirements" (July 16, 2018), as may be amended from time to time, and FTA Circular 5200.1 A (December 5, 2002), "Full Funding Grant Agreements Guidance," as may be amended from time to time.

SECTION 23. ATTACHMENTS—INCORPORATION

Each and every Attachment to this Agreement is incorporated by reference and made part of this Agreement.

SECTION 24. NOTICES

Notices required by this Agreement will be addressed as

follows:

As to the Government:

Mr. Stephen Goodman
Regional Administrator
Federal Transit Administration
1 Bowling Green
Suite 429
New York, NY 10004

As to the Grantee:

Mr. Kevin Corbett
President and CEO
One Penn Plaza East, 9th Floor
Newark, NJ 07102

SECTION 25. APPLICABLE LAW

If neither Federal statute nor Federal common law governs the interpretation of the provisions of this Agreement, the state law of the State of New Jersey will apply. This provision is intended only to supplement Section 3.g of the Master Agreement, "Application of Federal, State, and Local Laws, Regulations, Requirements, and Guidance."

SECTION 26. AWARD AND EXECUTION OF AGREEMENT

There are several identical counterparts of this Agreement in typewritten hard copy; each counterpart is to be fully signed in writing by the parties and each counterpart is deemed to be an original having identical legal effect. When signed and dated by the authorized official of the Government, this instrument will constitute an Award that should be executed by the Grantee within ninety (90) days of the date of the Government's Award (FTA Award). The Government may withdraw its Award of financial assistance and obligation of funds if this Agreement is not executed within the ninety (90) day period. Upon full Execution of this Agreement by the Grantee, the effective date will be the date the Government awarded funding under this Agreement as set forth below.

THE GOVERNMENT HEREBY AWARDS THIS FULL FUNDING GRANT AGREEMENT THIS

_____ DAY OF _____, 2021

Signature: _____

K. Jane Williams
Deputy Federal Transit Administrator
FEDERAL TRANSIT ADMINISTRATION

EXECUTION BY GRANTEE

The Grantee, by executing this Agreement, affirms this FTA Award; adopts and ratifies all statements, representations, warranties, covenants, and materials it has submitted to FTA; consents to this Award; and agrees to all terms and conditions set forth in this Agreement.

THE GRANTEE HEREBY EXECUTES THIS FULL FUNDING GRANT AGREEMENT THIS

_____ DAY OF _____, 2021

Signature: _____

Kevin Corbett
President and CEO
New Jersey Transit Corporation

ATTESTED BY:

Signature: _____

Name (Print/Type):
Title of Grantee Official:
Name of Grantee Organization:

AFFIRMATION OF GRANTEE'S ATTORNEY

As the undersigned Attorney for the Grantee, I affirm to the Grantee that I have examined this Agreement and the proceedings taken by the Grantee relating to it. As a result of this examination I hereby affirm to the Grantee the Execution of the Agreement by the Grantee is duly authorized under state and local law. In addition, I find that in all respects the Execution of this Agreement is due and proper and in accordance with applicable State and local law. Further, in my opinion, this Agreement constitutes a legal and binding obligation of the Grantee in accordance with the terms of the Agreement. Finally, I affirm to the Grantee that, to the best of my knowledge, there is no legislation or litigation pending or imminent that might adversely affect the full implementation of the Project in accordance with the terms thereof.

DATED _____ DAY OF _____, 2021

AFFIRMED BY:

Signature: _____

Suzanne L. Silverman
Attorney at Law
Kaplan Kirsch and Rockwell LLP

Attachment 1
New Jersey Transit Corporation
Portal North Bridge Project
Located Between Kearny and Secaucus, Hudson County, New Jersey

Scope of the Project

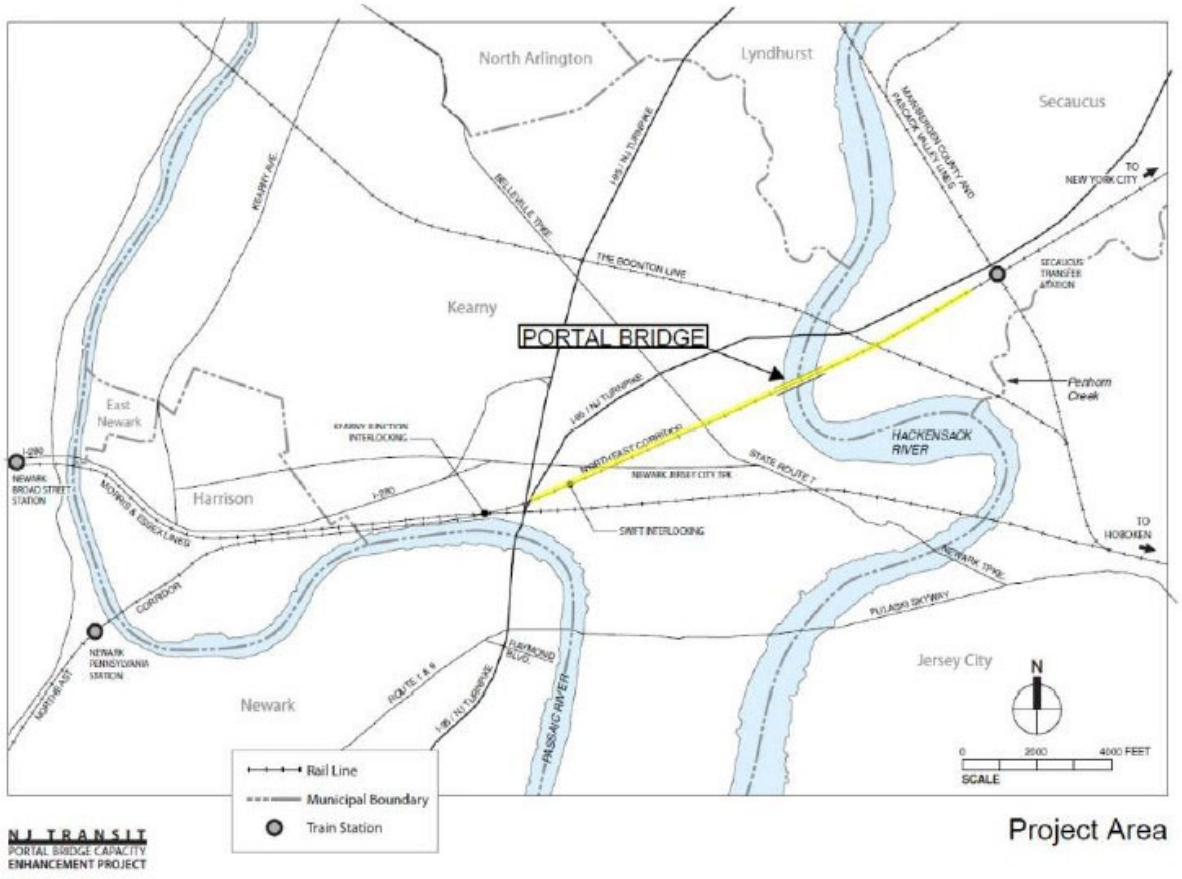
The Portal North Bridge project involves replacing the existing 110-year-old two-track railroad swing bridge over the Hackensack River, with a new fixed bridge carrying two (2) new tracks. The segment of the bridge that will span directly above the river will consists of three (3), 400 foot-long "Network Tied Arch" spans, equaling a distance of about 1,200 feet. In total, the Project's 2.44 miles consist of approximately 6,200 linear feet of new railroad embankment sections and approximately 6,700 linear feet of bridge and viaduct structure sections. Related project components include items such as structural, track, civil, communications, signals, electric traction power, facilities power, catenary, and control center modifications. The proposed project also includes the purchase of 25 multilevel commuter railcars for NJ TRANSIT to expand its service in the corridor.

Currently 20 trains ranging in length from eight to twelve cars each cross the bridge during the morning peak hour from 7:34 AM to 8:32 AM in the peak direction of service, offering 25,481 passenger seats. Upon completion of the project, NJ TRANSIT will increase the number of passenger seats by 3,673 by adding multilevel cars to nine of its existing peak hour trains, replacing a full consist of single-level passenger cars with multilevel cars on one peak hour train, and adding one additional train during the morning peak hour in the peak direction of service, thereby increasing capacity by 14.4 percent.

The Required Completion Date for the Project is June 30, 2028.

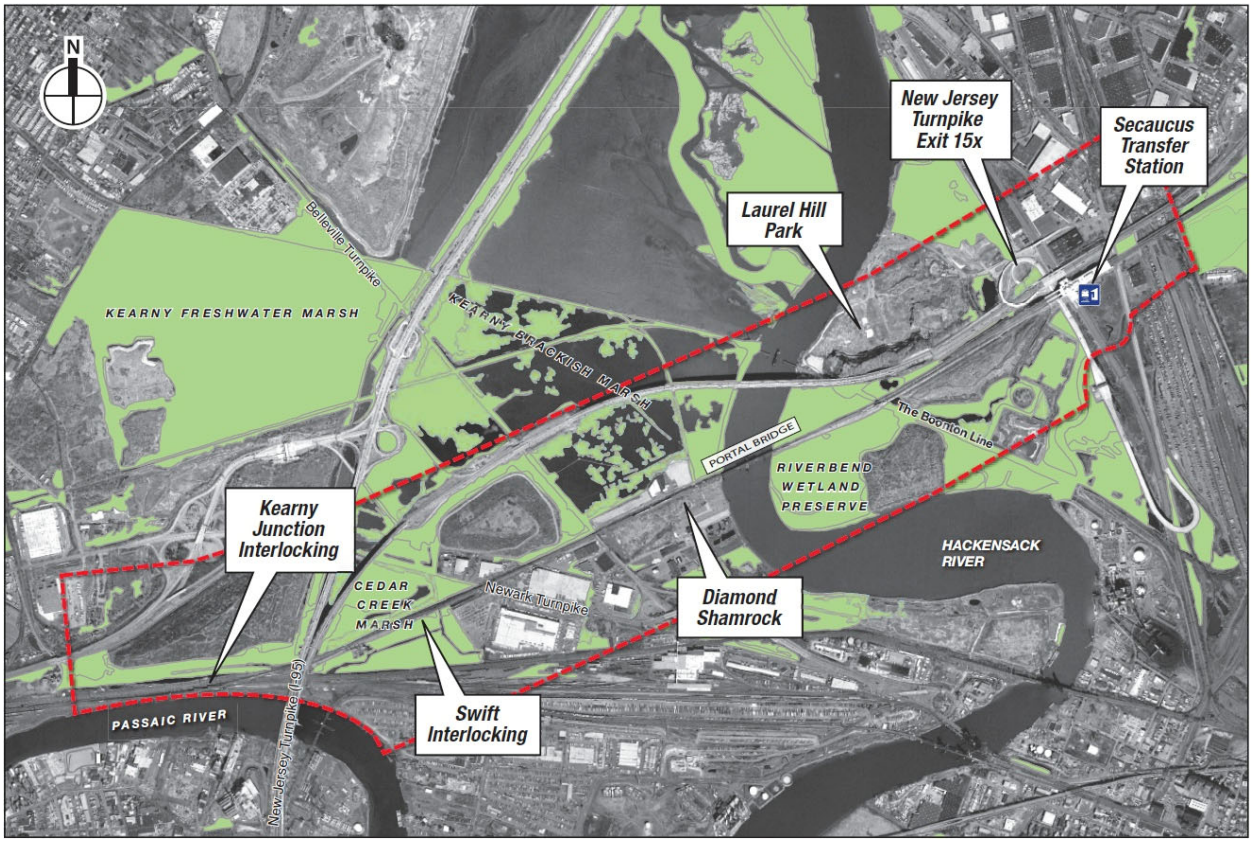
Attachment 1A
New Jersey Transit Corporation
Portal North Bridge Project
Located Between Kearny and Secaucus, Hudson County, New Jersey

Project Vicinity



Attachment 1B
New Jersey Transit Corporation
Portal North Bridge Project
Located Between Kearny and Secaucus, Hudson County, New Jersey

Project Location



Attachment 2
New Jersey Transit Corporation
Portal North Bridge Project

Project Description

Standard Cost Category (SCC) Description of the Project

The following provides a description of the entire intercity rail and public transportation project scope by Standard Cost Category (SCC). Those elements specific to the intercity rail component are noted below where applicable.

The public transportation components of the SCC form the basis for the Baseline Cost Estimate (BCE) and Baseline Schedule contained in Attachments 3 and 4, respectively.

SCC 10 – Guideway and Track Elements: This SCC Category includes the construction of the proposed guideway and new track systems, briefly described in the following subcategories:

SCC 10.04 – Guideway: Aerial structure: The Project will construct a new two-track elevated guideway generally between Kearny Interlocking, located on the westside of the Hackensack River, and Lack Interlocking which is located on the eastside of the river. The scope of the Project will also include the construction of what's called a "Duck Under" structure on the westside of the river which will be built underneath the viaduct carrying new Tracks 2 and 3. The purpose of the Duck Under structure will allow for westbound trains coming from Penn Station New York (PSNY) into New Jersey to connect with NJ TRANSIT's Morris and Essex Line via NJ TRANSIT's Mid-Town Direct Service. The scope of work within this subcategory includes foundations, columns, stringers, bents, bearing assemblies, decking, and drainage systems.

SCC 10.08 – Guideway: Retained Cut or Fill: This subcategory provides for the excavation of certain areas of the Project, backfilling other sections of the Project and, the construction of five (5) retaining walls required to support the expansion and/or widening of certain sections of the Northeast Corridor's (NEC) existing railroad embankment system, all of which is needed to support the realignment of the NEC's existing tracks, and the installation of the new tracks.

SCC 10.11– Track: Ballasted: This subcategory provides for the construction of new Tracks 2 and 3 which will be supported on a fixed, ballasted guideway. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 10.12 – Track: Special (switches, turnouts): This subcategory provides for the fabrication of special trackwork, interchangeably called either switches or turnouts, which will later be installed within the existing and new interlockings. This special trackwork, formally designated as "#26½ turnouts" in railroad terminology, will allow trains to switch their movement from one track to an adjacent track at a speed of up to 80 mph. Eight (8) "#26½ turnouts" are slated to be installed on the project. Amtrak may however, at a later date but within the duration of the Project, supersede the order and fabrication of the "#26½ turnouts", with other ones that are

designated as "#24 turnouts" that allow for the same 80 mph divergent speeds between adjacent tracks, but are believed by Amtrak to require less overall maintenance over time. his specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 40 Workbook – Sitework and Special Conditions: This SCC includes all necessary site work and special work associated with utilities, hazardous materials, environmental mitigations, landscaping, temporary facilities, and all associated general conditions including labor for train and vehicular control in support of increasing the capacity of guideways. SCC 40 includes the following applicable subcategories:

SCC 40.01 – Demolition, Clearing, Earthwork: This subcategory includes site clearing, earthwork, demolition of existing structure and buildings in support of the construction of the guideway systems. This includes removal or the construction of project elements consisting of retained embankments, elevated track structures, track and traction power system components to make way for the newly constructed project elements. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 40.02 – Site Utilities, Utility Relocation: This subcategory includes relocation of multiple existing utilities that are located within the boundaries of the Project. These utilities include electric, fiber optic, communication, cable, water, sewer and gas. This subcategory also includes the installation of all new permanent and temporary site utilities as part of the scope-of-work of the Project.

SCC 40.03 – Hazardous material, contaminated soil removal/mitigation, ground water treatments: This subcategory includes the proper handling, disposing, or treating contaminated soil, identified as containing Hexavalent Chromium (Cr(VI)), and equally contaminated groundwater in support of the construction of the guideway in SCC Category 10. It also includes handling, abatement or disposing of hazardous materials in existing facilities that are being demolished, including the existing Portal Bridge.

SCC 40.04 – Environmental mitigation, e.g. wetlands, historic archeological, parks: This subcategory includes satisfying the mitigation requirements imposed on the project, due to impacts to be caused to the existing wetland areas, as well as meeting the requirements of a Memorandum of Agreement executed between the State of New Jersey's Historic Preservation Office, the Federal Railroad Administration, Amtrak and NJ TRANSIT, that governs the discovery and dispensation of any artifacts of historical note found during the construction of the Project, as well as the preservation and future public display of certain components of the existing Portal Bridge.

SCC 40.08 – Temporary facilities and other indirect costs during construction: This subcategory includes mobilization and de-mobilization of field offices, equipment and all other associated general condition costs, vehicular and train traffic control, temporary utilities and temporary protection of work as may be required to support any interim construction phasing of the Project.

SCC 50 – Systems: This SCC includes the train control, traction power supply and distribution, and communications required for the Project. SCC 50 includes the following applicable subcategories:

SCC 50.01 – Train control and signals: This subcategory includes fabrication and installation of the proposed new signaling system improvements between Kearny Interlocking and Lack Interlocking on the Northeast Corridor, including installation, testing, commissioning and the cutover work required to connect new Tracks 2 and 3 to existing Tracks 2 and 3. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 50.03 – Traction power supply: substations: This subcategory includes the installation of new electric traction power equipment and cabling on the NEC between Kearny Interlocking and Lack Interlocking, including the installation, testing, commissioning and cutover work required to be undertaken to connect new Tracks 2 and 3 to existing Tracks 2 and 3. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 50.04 – Traction power distribution: catenary and third rail: This subcategory provides for the installation of a new traction power catenary system, including catenary poles, between Kearny Interlocking and Lack Interlocking on the NEC. The amount to be expended under this specific subcategory includes both the public transportation and intercity rail components as shown in the SCC.

SCC 50.05 – Communications: This subcategory provides for the installation of communication cables, right-of-way and station cameras, pole mounts and power supplies, fiber optic cables, fiber closed circuit TV, and a wayside phone system between Kearny Interlocking and Lack Interlocking on the NEC. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 50.07 – Central Control: This subcategory provides for the installation of new control systems within Amtrak's Penn Station Control Center (PSCC) which will enable Amtrak to better dispatch the NJ TRANSIT and Amtrak trains over this stretch of the NEC between Newark and PSNY. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 60 – Right-of-Way, Land, Existing Improvements: This SCC includes the acquisition of right-of-way, including relocations, as well as permanent and temporary easements required for construction of the Project. SCC 60 includes the following applicable subcategories:

SCC 60.01 – Purchase or lease of real estate: This subcategory provides for the acquisition of right-of-way, property rights, and temporary easements required for construction and operation of the capacity expansion project. Approximately 15 properties, owned by other public and private parties, will be impacted by construction of the Project, requiring the need to secure temporary and/or permanent easements to support construction operations. One property that is

owned by Jana Corporation will need to be acquired in full to allow for the construction of the viaduct on the westside of the river.

SCC 60.02 – Relocation of existing household and businesses: This subcategory includes all relocation costs associated with property acquisitions. One existing business owner, Metal Green Recycling, Inc., an occupant of the property owned by Jana Corporation noted above, will need to be relocated in order to allow for the construction of the Project.

SCC 70 – Vehicles: This SCC provides for the procurement of rail cars needed for capacity expansion of the Project. SCC 70 includes the following applicable subcategories:

SCC 70.03 – Commuter Rail: This subcategory includes the fabrication, inspection, delivery, testing, and commissioning of 25 new commuter rail cars to allow for more frequent service along the NEC.

SCC 80 – Professional Services: This SCC includes all the costs of engineering, project management, construction administration and management, permits and fees, legal fees, training, start-up, testing, and other direct costs. SCC 80 includes the following applicable subcategories:

SCC 80.01 – Project Development: This subcategory includes the costs for providing professional and technical services during the Project Development phase.

SCC 80.02 – Engineering: This subcategory includes the costs for providing professional and technical services, including but not limited to, engineering services, architectural services as may be needed, design services, and specialty engineering support services, from the Engineering Phase and continuing through the Construction Phase of the Project, and through closeout of the Project.

SCC 80.03 – Project Management for Design and Construction: This subcategory includes the costs of project management for design and construction including NJ TRANSIT staff and other contracted professional services to manage and administer the Project through closeout.

SCC 80.04 – Construction Administration and Management: This subcategory includes the professional consultants contracted to provide construction management services which includes, but is not limited to, project scheduling, design support coordination, construction coordination, inspection, field engineering, quality assurance, safety certification, change order processing, the preparation of independent cost estimates, and undertaking all other related tasks as may be requested of the Construction Manager by NJ TRANSIT that are required to support construction of the Project. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 80.05 – Professional Liability and Other Non-Construction Insurance: This subcategory includes the professional liability and other non-construction insurance covering NJ TRANSIT and/or its consultants. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 80.06 – Legal: Permits; Review Fees by other agencies, cities, etc.: This subcategory includes the cost of outside legal services, permit fees and other similar services or fees that may be required for the Project.

SCC 80.07 – Surveys, Testing, Investigation, Inspection: This subcategory includes the survey and inspection costs required for the Project.

SCC 80.08 – Startup: This subcategory includes the startup, training and protection services provided for the project. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 90 – Unallocated Contingency: This SCC category represents the unallocated contingency for the Project. It provides a management reserve to address non-specified additional costs and uncertainty due to risk factors such as differing site conditions, commodity pricing fluctuations, unfavorable market conditions, and bid risk. It also covers unforeseen expenses and variances between estimates and actual costs. Contingency will be managed over the life of the Project in accordance with the Risk and Contingency Management Plan. This specific subcategory includes both public transportation and intercity rail components as shown in the SCC.

SCC 100 – Finance Charges: This category includes finance charges expected to be paid prior to either completion of the Project or the receipt of all the Section 5309 Capital Investment Grants funding, whichever occurs later in time.

Attachment 3
New Jersey Transit Corporation
Portal North Bridge Project
Baseline Cost Estimate For the Core Capacity Project

Table 1

Applicable Line Items Only		**YOE Dollars Total**
10 GUIDEWAY & TRACK ELEMENTS (2.44 miles)		**$795,436,069**
10.04	Guideway: Aerial structure	$722,905,288
10.08	Guideway: Retained cut or fill	$58,991,046
10.12	Track: Specials (Switches, Turnouts)	$7,024,142
10.13	Track: Vibration and Noise Dampening	$6,516,593
40 SITEWORK & SPECIAL CONDITIONS		**$266,747,642**
40.01	Demolition, Clearing, Earthwork	$20,176,230
40.02	Site Utilities, Utility Relocation	$10,776,462
40.03	Haz Mat'l, contaminated soil removal / mitigation, ground water treatments	$35,439,076
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	8,257,576
40.07	Automobile, bus, van accessways including roads, parking lots	39,180,924
40.08	Temporary Facilities and other indirect costs during construction	152,917,373
50 SYSTEMS		**132,512,984**
50.01	Train control and signals	$18,966,934
50.03	Traction power supply: substations	$33,310,795
50.04	Traction power distribution: catenary and third rail	$53,296,382
50.05	Communications	$22,881,949
50.07	Central Control	$4,056,925
60 ROW, LAND, EXISTING IMPROVEMENTS		**$24,310,603**
60.01	Purchase or Lease of Real Estate	$20,948,691
60.02	Relocation of Existing Households and Businesses	$3,361,912
70 VEHICLES (25)		**$71,329,452**
70.03	Commuter Rail	$71,329,452
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)		**$105,774,360**
80.01	Project Development	$8,249,553
80.02	Engineering	$30,848,773

Applicable Line Items Only		**YOE Dollars Total**
80.03	Project Management for Design and Construction	$16,022,616
80.04	Construction Administration & Management	$20,943,764
80.05	Professional Liability and other Non-Construction Insurance	$9,600,786
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	$1,311,941
80.07	Surveys, Testing, Investigation, Inspection	$11,288,555
80.08	Startup	$7,508,371
Subtotal (10 - 80)		**$1,396,111,110**
90 UNALLOCATED CONTINGENCY		**$156,023,934**
Subtotal (10 - 90)		**$1,552,135,044**
100 FINANCE CHARGES		**$180,033,407**
Total Project Cost (10 - 100)		**$1,732,168,451**

Attachment 3
New Jersey Transit Corporation
Portal North Bridge Project
Baseline Cost Estimate For the Core Capacity Project

Table 2 – Inflated Cost to Year of Expenditure

Standard Cost Category Description	Base Year Dollars w/o Contingency	Base Year Dollars Allocated Contingency	Base Year Dollars TOTAL	Inflation Factor	YOE Dollars TOTAL
10 GUIDEWAY & TRACK ELEMENTS (2.44 miles)	$623,948,126	$92,735,252	$716,683,378	1.1099	$795,436,069
20 STATIONS, STOPS, TERMINALS, INTERMODAL	$0	$0	$0	0	$0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$0	$0	$0	0	$0
40 SITEWORK & SPECIAL CONDITIONS	$212,969,702	$24,396,135	$237,365,837	1.1238	$266,747,642
50 SYSTEMS	$130,891,764	$13,089,176	$143,980,940	0.9204	$132,512,984
60 ROW, LAND, EXISTING IMPROVEMENTS	$20,292,281	$3,000,000	$23,292,281	1.0437	$24,310,603
70 VEHICLES (25)	$58,562,053	$2,928,103	$61,490,156	1.1600	$71,329,452
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	$166,155,546	$15,889,285	$182,044,831	0.5810	$105,774,360
90 UNALLOCATED CONTINGENCY			$153,131,450	1.0189	$156,023,934
100 FINANCE CHARGES			$152,669,652	1.1792	$180,033,407
Total Project Cost (10 - 100)			**$1,670,658,525**	1.0368	**$1,732,168,451**

Attachment 3
New Jersey Transit Corporation
Portal North Bridge Project

Baseline Cost Estimate For the Core Capacity Project

Table 3 – BCE by Source of Funding

	Total Project Cost in YOE Dollars	Federal 5309 CIG	Federal Congestion Mitigation and Air Quality	Local
10 GUIDEWAY & TRACK ELEMENTS (2.44 miles)	$795,436,069	$475,077,409	$0	$320,358,660
20 STATIONS, STOPS, TERMINALS, INTERMODAL	$0	$0	$0	$0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$0	$0	$0	$0
40 SITEWORK & SPECIAL CONDITIONS	$266,747,642	$89,806,639	$0	$176,941,003
50 SYSTEMS	$132,512,984	$52,767,256	$0	$79,745,729
60 ROW, LAND, EXISTING IMPROVEMENTS	$24,310,603	$11,001,584	$0	$13,309,018
70 VEHICLES (25)	$71,329,452	$0	$57,063,562	$14,265,890
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	$105,774,360	$81,119,328	$657	$24,655,032
90 UNALLOCATED CONTINGENCY	$156,023,934	$55,778,507	$0	$100,245,427
100 FINANCE CHARGES	$180,033,407	$949,277	$0	$179,084,130
Total Project Cost (10 - 100)	**$1,732,168,451**	**$766,500,000**	**$57,063,562**	**$908,604,889**

Sources of Federal Funding and Matching Share Ratios				
	Costs Attributed to Source of Funds	Federal/Local Matching Ratio within Source	All Federal Funds	Local Funds
Federal 5309 CIG	$1,660,838,999	46.15/53.85	$766,500,000	$894,338,999
Other Federal: CMAQ	$71,329,452	80/20	$57,063,562	$14,265,890
Total	**$1,732,168,451**		**$823,563,562**	**$908,604,889**
Overall Federal Share of Project		**47.55%**		
CIG Share of Project		**44.25%**		

Attachment 3A
New Jersey Transit Corporation
Portal North Bridge Project

Core Capacity Project Budget

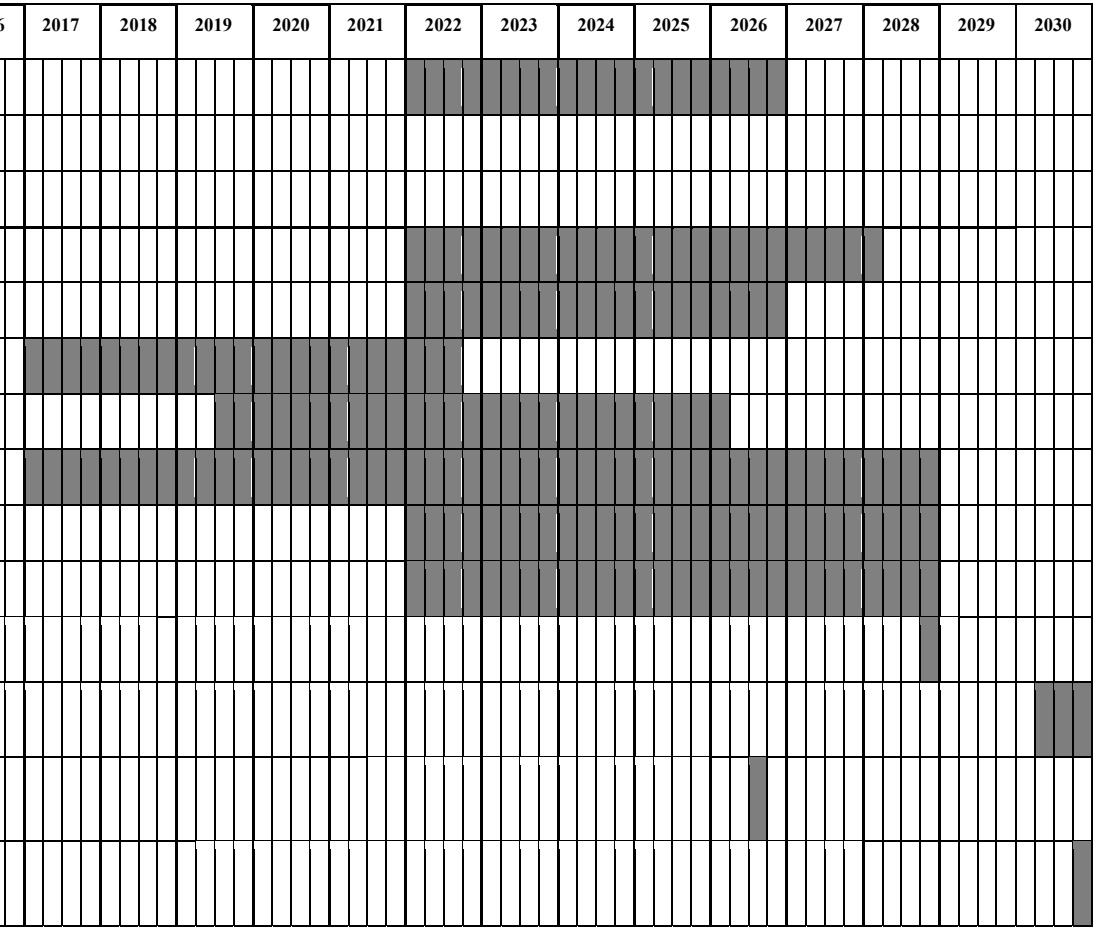
Table 3A – Scope and Activity Description

Scope Code	ALI Code	Scope and Activity Line Item Descriptions	Qty	Total Federal %	Federal 5309 CIG			Federal Congestion Mitigation and Air Quality			Project Totals		
					Federal	Local	Total	Federal	Local	Total	Federal	Local	Total
14010	14.01.10	GUIDEWAY & TRACK ELEMENTS	2.44	59.73%	$475,077,409	$320,358,660	$795,436,069	$0	$0	$0	$475,077,409	$320,358,660	$795,436,069
14020	14.02.20	STATIONS, STOPS, TERMINALS, INTERMODAL	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
14030	14.03.20	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
14040	14.04.40	SITEWORK & SPECIAL CONDITIONS		33.67%	$89,806,639	$176,941,003	$266,747,642	$0	$0	$0	$89,806,639	$176,941,003	$266,747,642
14050	14.05.50	SYSTEMS		39.82%	$52,767,256	$79,745,729	$132,512,984	$0	$0	$0	$52,767,256	$79,745,729	$132,512,984
14060	14.06.60	ROW, LAND, EXISTING IMPROVEMENTS		45.26%	$11,001,584	$13,309,018	$24,310,603	$0	$0	$0	$11,001,584	$13,309,018	$24,310,603
14070	13.13.70	VEHICLES	25	80.00%	$0	$0	$0	$57,063,562	$14,265,890	$71,329,452	$57,063,562	$14,265,890	$71,329,452
14080	14.08.80	PROFESSIONAL SERVICES		76.69%	$81,119,328	$24,655,032	$105,774,360	$0	$0	$0	$81,119,328	$24,655,032	$105,774,360
14090	14.09.90	UNALLOCATED CONTINGENCY		35.75%	$55,778,507	$100,245,427	$156,023,934	$0	$0	$0	$55,778,507	$100,245,427	$156,023,934
14100	14.10.10	FINANCE CHARGES		00.53%	$949,277	$179,084,130	$180,033,407	$0	$0	$0	$949,277	$179,084,130	$180,033,407
Total Project Cost (10 - 100)				47.55%	$766,500,000	$894,338,999	$1,660,838,999	$57,063,562	$14,265,890	$71,329,452	$823,563,562	$908,604,889	$1,732,168,451

TPE-201202-001

Attachment 4
New Jersey Transit Corporation
Portal North Bridge Project
Baseline Schedule

SCHEDULE	Start Date	End Date
10 GUIDEWAY & TRACK ELEMENTS (2.44 MILES)	7/26/2021	6/30/2026
20 STATIONS, STOPS, TERMINALS, INTERMODAL	n/a	n/a
30 SUPPORT FACILITIES, YARDS, SHOPS, ADMIN	n/a	n/a
40 SITEWORK & SPECIAL CONDITIONS	7/26/2021	7/31/2027
50 SYSTEMS	7/26/2021	6/30/2026
60 ROW, LAND, EXISTING IMPROVEMENTS	7/1/2016	3/31/2022
70 VEHICLES (25)	1/1/2019	9/30/2025
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	7/1/2016	6/30/2028
90 UNALLOCATED CONTINGENCY	7/1/2021	6/30/2028
100 FINANCE CHARGES	7/1/2021	6/30/2028
PROJECT COMPLETION (Expanded Service begins)	6/30/2028	
BEFORE AND AFTER STUDY, 2 YEARS POST COMPLETION	6/30/2030	12/31/2030
FULLFILLMENT OF THE CORE CAPACITY FUNDING COMMITMENT		9/30/2026
COMPLETION OF PROJECT CLOSE-OUT, RESOLUTION OF CLAIMS		12/31/2030



Attachment 5
New Jersey Transit Corporation (NJ TRANSIT)
Portal North Bridge Project
Hudson County, New Jersey

Prior Grants and Related Documents

I. Prior Grants (not included in the FFGA)

Project No.	Obligation Date	Federal Amount	Funding Source	Purpose
None				

II. Related Documents

a. Federal Railroad Administration (FRA) Notice of Intent to Initiate Environmental Review for the Portal Bridge Capacity Enhancement Project December 12, 2006
b. FRA Draft Environmental Impact Statement February 15, 2008
c. FRA Final Environmental Impact Statement October 1, 2008
d. FRA Record of Decision December 23, 2008
e. FRA Environmental Re-evaluation May 20, 2010
f. FRA Environmental Re-evaluation January 26, 2011
g. FRA Reaffirms the Record of Decision from December 2008 March 30, 2011
h. Project included in Fiscally Constrained Long Range Transportation Plan September 10, 2013
i. FTA Approval to Enter Core Capacity Project Development July 14, 2016
j. FRA Environmental Re-evaluation August 11, 2016
k. North Jersey Transportation Planning Authority Selection of Locally Preferred Alternative November 14, 2016
l. FTA Adoption of the FRA Record of Decision July 25, 2017
m. North Jersey Transportation Planning Authority Adoption of Locally Preferred Alternative in Fiscally Constrained Long Range Transportation Plan November 13, 2017
n. FTA Approval to Enter Core Capacity Engineering June 19, 2020

III. FFGA Grant History (*Grants Under the FFGA*)

Project No.	Obligation Date	Federal Amount	Funding Source	Purpose
None				

Attachment 6
New Jersey Transit Corporation (NJ TRANSIT)
Portal North Bridge Project
Hudson County, New Jersey

Schedule of Federal Funds

Section 3005 of the Fixing America's Surface Transportation (FAST) Act (Pub. L. 114-94; Dec. 4, 2015) authorizes FTA to award discretionary Federal capital investment funds for design and construction of the NJ TRANSIT Portal North Bridge Project ("Project"), which is a Core Capacity Improvement project. *See*, 49 U.S.C. § 5309(e). In accordance with Federal transit law at 49 U.S.C. Chapter 53 and FTA Circular 5200.1A, Full Funding Grant Agreements Guidance (December 5, 2002), by the execution of this Agreement the Government is limiting its commitment to provide Federal Capital Investment Grants funds for the Project to those funds that have been or may be appropriated during the term of the FAST Act and subsequent authorizations. The Government and the Grantee recognize, however, that the period of time necessary to complete the Project will extend beyond the FAST Act, as evidenced by Attachment 4 to this Agreement (Baseline Schedule).

Currently, the Government and the project sponsor anticipate that the Capital Investment Grants funds will be provided for the Project as follows:

Proposed Schedule of Federal Funds
(Based on Year of Appropriation)

Fiscal Year	Section 5309 Capital Investment Grants Funding	Federal CMAQ Funding	Local/State Funding	Total Funding
2021 and prior	$248,000,000	$0	$273,608,526	$521,608,526
2022	$125,000,000	$14,265,891	$153,646,513	$292,912,404
2023	$100,000,000	$0	$110,326,019	$210,326,019
2024	$100,000,000	$39,944,493	$154,395,187	$294,339,680
2025	$100,000,000	$0	$110,326,019	$210,326,019
2026	$93,500,000	$0	$103,154,827	$196,654,827
2027	$0	$2,853,178	$3,147,798	$6,000,976
Total	**$766,500,000**	**$57,063,562**	**$908,604,889**	**$1,732,168,451**

Note: Sources of state funding include the following: New Jersey Economic Development Authority Bonds repaid with New Jersey Transportation Trust Fund (NJTTF) and New Jersey Turnpike Authority (NJTA) Revenues; cash revenues provided directly from the NJTTF and NJTA; and National Railroad Passenger Corporation (Amtrak) funds.

Attachment 7
New Jersey Transit Corporation (NJ TRANSIT)
Portal North Bridge Project
Hudson County, New Jersey

Measures to Mitigate Environmental Impacts

The measures to mitigate the environmental impacts of the Portal North Bridge Project (the Project) are included in the environmental record and include the following documents, which are incorporated within.

a. Federal Railroad Administration (FRA) Final Environmental Impact Statement October 1, 2008
b. FRA Record of Decision December 23, 2008
c. FRA Environmental Re-evaluation May 20, 2010
d. FRA Environmental Re-evaluation January 26, 2011
e. FRA Reaffirmation of the Record of Decision from December 2008 March 30, 2011
f. FRA Environmental Re-evaluation August 11, 2016
g. FTA Adoption of the FRA Record of Decision July 25, 2017

The mitigation measures and other project features that reduce adverse environmental and community impacts to which FTA and NJ TRANSIT committed in the Record of Decision may not be eliminated from the Project, except by FTA's written consent and in accordance with applicable laws and regulations. These mitigation measures include, but are not limited to, commitments to perform further consultation with any agency on environmental and related matters. Attachment D, "Measures to Mitigate Harm," to the FTA Record of Decision describes the mitigation measures for the Project. The table's purpose is to facilitate monitoring the implementation of the mitigation measures during final design and construction. Monitoring and mitigation compliance will be the responsibility of NJ TRANSIT. That table and its periodic revisions to add the measures resulting from required consultations, permit approvals and FTA-approved changes and to update the implementation status of the measures are incorporated herein by reference.

Attachment 8
New Jersey Transit Corporation (NJ TRANSIT)
Portal North Bridge Project
Hudson County, New Jersey

Implementation of a Before and After Study

The New Jersey Transit Corporation (NJ TRANSIT) will assemble information and conduct analyses to identify the actual outcomes of the Portal North Bridge Project (the Project) and evaluate the reliability of the predictions of those outcomes prepared during the planning and development of the project.
NJ TRANSIT will assemble the information and conduct the analyses in accordance with the Before-and-After Study Plan prepared by NJ TRANSIT and approved by the Federal Transit Administration (FTA). Specifically, the plan addresses the following requirements:

I. Required Information

NJ TRANSIT will assemble information on five key characteristics of the Project and its associated transit services:

1. Project scope: The physical components of the Project, including environmental mitigation and other related elements;
2. Capital cost: The total Project capital costs in constant dollars, formatted in FTA's Standard Cost Categories, and annual expenditures in year-of-expenditure dollars;
3. Service Levels: The service characteristics on the Project, feeder buses, and other affected transit services in the corridor;
4. Operation and maintenance (O&M) costs: Estimates the incremental operating/maintenance (O&M) costs of the project and the transit system as a whole;
5. Ridership: Describes peak-hour/peak-direction ridership and capacity on the project as well as overall ridership in the corridor.

II. Milestones

NJ TRANSIT will assemble predictions of Project outcomes at two milestones during development of the Project and will collect data at two milestones during its implementation. At each milestone, NJ TRANSIT will archive the assembled information, data, and documentation and provide to FTA a copy of the archive.

1. Entry into Engineering: The predicted outcomes on all five Project characteristics provided by NJ TRANSIT in support of its request to advance the Project;
2. Full Funding Grant Agreement: The predicted outcomes on all five Project characteristics provided by NJ TRANSIT in support of its request for a funding commitment, plus an analysis of the accuracy of predictions at the previous milestone compared to predictions at this milestone;
3. Actual Conditions before the Project: Data collected on existing transit services, O&M costs, and transit ridership immediately prior to any significant changes in transit services levels caused by either the construction or the opening of the Project; and
4. Actual Conditions after Project Completion: Data collected on the actual physical scope and capital costs of the Project when it is completed and on transit service levels, O&M costs and ridership two years after the start of the expanded service.

III. Final Report

Within 36 months after Project opening, NJ TRANSIT will complete a final report that for each project outcome: (1) documents the actual outcome of the Project; (2) evaluates the accuracy of the predicted

outcomes that were prepared during planning and development of the project; and (3) identifies any lessons learned about the preparation of those predictions that may be useful for future projects. The body of the final report will be 15-20 pages that will highlight findings, conclusions, and lessons learned. Appendices to the final report will provide details supporting the findings and conclusions.

IV. Coordination with FTA

NJ TRANSIT will maintain communication with FTA and its contractors on progress in implementing the Before-and-After Study Plan and provide opportunities for early review and for commenting on draft products. NJ TRANSIT must obtain approval in advance of any changes in the scope or schedule for the Study as defined in the Study Plan approved by FTA.

U.S. DOT/FEDERAL TRANSIT ADMINISTRATION
PROJECT MANAGEMENT OVERSIGHT PROGRAM
FTA REGION 2

FINAL

Oversight Procedure 52

Readiness to Execute
Full Funding Grant Agreement

Portal North Bridge Project

Kearny/Secaucus, New Jersey

NEW JERSEY TRANSIT

Newark, New Jersey

Final: December 1, 2020

PMOC Contract Number: 69319519-D-000016
Task Order Number: 69319520F300011
OP Reference: 52
David Evans and Associates, Inc., 17 Battery Place, Suite 1328, New York, NY 10004
PMOC Lead: Eric Chang, Contact Information: 212-742-4321, ehch@deainc.com
PMOC / Start of Assignment: David Evans and Associates, Inc. / March 2020

All readers are hereby instructed of the following limitations on any use of this report:

THIRD-PARTY DISCLAIMER

This Project Management Oversight Consultant (PMOC) report and all supporting reports and backup materials contain the findings, conclusions, professional opinions, and recommendations stemming from a risk-informed evaluation and assessment, prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except FTA or the Project Sponsor, in accordance with the purposes of the evaluation and assessment as described below. For projects funded through FTA's Major Capital Investment (New Starts) program, FTA and its PMOCs use a risk-informed assessment process to review and validate the Sponsor's scope, schedule, and cost estimate, and to analyze the Sponsor's project development and management. This process is iterative in nature. The results represent a "snapshot in time" for a specific project under the conditions known at that time. The evaluation or assessment and related results may subsequently change due to new information, changes in circumstances, additional project development, specific measures a Sponsor may take to mitigate risks, the Sponsor's selection of strategies for project execution, etc.

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LIST OF ACRONYMS

AACE	Association for the Advancement of Cost Engineering
Amtrak	National Railroad Passenger Corporation
BCE	Baseline Cost Estimate
CFR	Code of Federal Regulations
CIG	Capital Investment Grants
CIH	Central Instrument Huts
CM	Construction Management/Construction Manager
CP&P	Capital Planning and Programs
CQCM	Contractor's Quality Control Manager
DBB	Design, Bid, Build
DD	Data Date
DEA	David Evans and Associates, Inc.
DSDC	Design Services During Construction
EAC	Estimate at Completion
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GDC	Gateway Program Development Corporation
IPS	Integrated Project Schedule
MCC	Management Capacity and Capability
MOA	Memorandum of Agreement
MPH	Miles Per Hour
NEC	Northeast Corridor
NEPA	National Environmental Policy Act
NJT	New Jersey Transit
OP	Oversight Procedure
PANYNJ	Port Authority of New York and New Jersey
PBCE	Portal Bridge Capacity Enhancement
PM	Project Manager
PMCM	Project Manager Construction Management
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
PMQ	Program Manager of Quality
PMR	Program Manager of Risk
PNB	Portal North Bridge
PWP	Project Work Plan
QA/QC	Quality Assurance/Quality Control
QA/QCO	Quality Assurance/Quality Control Officer
QA/QCP	Quality Assurance/Quality Control Procedure
QMP	Quality Management Plan

RA	Risk Assessment
RAMP	Real Estate Acquisition Management Plan
RFMP	Rail Fleet Management Plan
ROC	Receiver Operating Characteristic
ROD	Record of Decision
ROW	Right-of-Way
RSD	Revenue Service Date
SCC	Standard Cost Category
SSMP	Safety and Security Management Plan
SSPP	System Safety Program Plan
VE	Value Engineering
WBS	Work Breakdown Structure
YOE	Year of Expenditure

1 EXECUTIVE SUMMARY

1.1 Introduction

The New Jersey Transit Corporation (NJT) in cooperation with the Gateway Program Development Corporation (GDC), the Port Authority of New York and New Jersey (PANYNJ), and the National Railroad Passenger Corporation (Amtrak) propose the construction of a new railroad bridge across the Hackensack River in Hudson County, New Jersey along the Northeast Corridor (NEC) to replace the existing bridge, which is over 100 years old and represents a significant operational bottleneck. The proposed Portal North Bridge (PNB) project also includes the purchase of 25 multilevel commuter railcars for NJT to expand its service in the corridor. NJT is the Project Sponsor of the PNB project and is seeking federal funding support for the project under the Core Capacity element of the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) Program.

1.2 PMOC Review

The Project Management Oversight Consultant (PMOC) conducted its review of the PNB project's Readiness to Execute a Full Funding Grant Agreement (FFGA) in accordance with the requirements of FTA Oversight Procedure (OP) 52. This review was conducted to confirm that:

- All technical aspects of the FFGA are complete and accurate.
- All required plans and analysis have been satisfactorily prepared and implemented to the extent necessary.
- The FFGA attachments accurately represent the project's Scope, Schedule, and Costs.
- All critical third-party agreements are complete.

The PMOC reviewed project documentation provided by NJT, including:

- Project scope definition, including the basis of design, 100% design documents, and procurement documents for the planned construction contract and documents regarding the commuter rail cars to be procured as part of the project.
- Documentation for third-party agreements.
- The Project Management Plan (PMP, Revision 3.0, September 18, 2020) and sub-plans.
- The project schedule and supporting documents.
- The project cost estimate and supporting documents.
- FFGA attachments.

1.3 Findings

Management Capability and Capacity

The PMP includes all the subject areas recommended in FTA Circular 5200.1 and the Project and Construction Management Guidelines and is satisfactory for the FFGA stage of project development. The submitted PMP sub-plans were found to be acceptable for execution of the FFGA. The Sponsor's staffing plan and it's record of delivery on capital improvement projects indicate that adequate resources have been assigned to the project. The PMOC concludes that the Project Sponsor and Amtrak have demonstrated sufficient Management Capacity and Capability

(MCC) to execute the FFGA, advertise the remaining construction contract for the PNB project, and prepare for award of the contract.

Scope

The PMOC review determined that design is complete and that the project scope included in the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) is reflected in the Contract Drawings and Technical Provisions. NJT has started preparing for procurement of the proposed construction contract. In the opinion of the PMOC, the project scope is completely defined and meets the FTA guidance and requirements necessary for execution of the FFGA.

Schedule

The PMOC has evaluated the Project sponsor's schedule per FTA requirements. It is the PMOC's professional opinion that the current Integrated Project Schedule (IPS) is mechanically correct and that it meets the FTA guidance and requirements necessary for execution of the FFGA. FTA guidance requires that the project schedule include at least 25 percent of the total project duration as float, which results in a project completion date for the FFGA of February 2028. NJT has shown a project completion date of June 30, 2028 in their schedule and this meets the FFGA requirements.

Cost Estimate

NJT's Standard Cost Category (SCC) workbook dated November 24, 2020 estimates the Year-of-Expenditure (YOE) total project cost at $1.897 billion. The project cost estimated by NJT includes $171.5 million of allocated contingency, $173.4 million of unallocated contingency, $180 million for finance charges and $67.9 million for vehicles. The net project cost without finance charges is $1.717 billion, YOE. The November 2020 SCC cost estimate was found to be mechanically correct in the tabulation of the unit costs, application of factors, and translation to the "Build Main" tab of the SCC workbook.

The PMOC's RA refresh indicated that the P65 project cost is $1.717 billion (including 25 percent in total contingency) in YOE dollars excluding finance charges. The FTA P65 target including $180 million of the finance charges, is $1.897 billion, matching the NJT total project cost. The cost estimate therefore satisfactorily meets FTA's requirements.

Review of Critical Third-party Agreements

NJT provided documentation for 51 third-party agreements. The PMOC identified 15 critical third-party agreements and confirmed that all 15 critical third-party agreements have been resolved and executed.

During the review of the Project Development Agreement (PDA), concerns and comments related to Amtrak role and responsibility were raised by the FTA and FRA. These concerns and comments were resolved between the project stakeholders and incorporated into the final agreement, which was executed on November 27, 2020.

1.4 Conclusion

The PMOC has determined that:

- All technical aspects of the FFGA are complete and accurate.
- The FFGA attachments accurately represent the project's Scope, Schedule, and Costs.
- All critical third-party agreements are complete.

The PMOC has determined that NJT has met FTA's readiness requirements for execution of the FFGA for the PNB project with a budget of $1.897 billion in YOE dollars and a project completion date of June 30, 2028 in their schedule and this meets the FFGA requirements.

2 INTRODUCTION

The existing Portal Bridge is a two-track, moveable swing-span bridge between the Town of Kearny and the Town of Secaucus in Hudson County, New Jersey. It was constructed by the Pennsylvania Railroad in 1907 and began operation in 1910. Approximately 450 NJT and 150 Amtrak trains operate over Portal Bridge on weekdays. The bridge opening and closing cycle time, bridge opening and closing unreliability, and requirements for frequent and extensive inspection and maintenance can result in delays that propagate throughout both the NJT and the Amtrak systems.

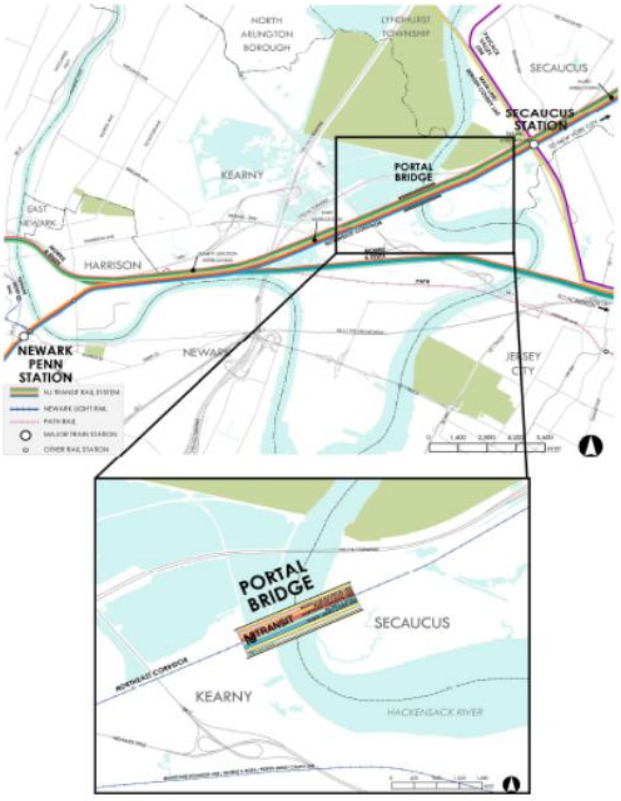
2.1 Project Sponsor

In April 2017, NJT officially became the Project Sponsor of the PNB project, as it advanced from the Project Development Phase to the Engineering Phase. By ridership, NJT is the largest statewide public transit system and the third-largest provider of bus, rail, and light rail transit in the United States. NJT service includes 11 commuter rail lines, and it operates over 100 diesel locomotives and 61 electric locomotives. It has more than 650 push-pull cars and 230 electric multiple unit cars.

2.2 Project Description and Status

The proposed Portal North Bridge (see Figure 1) would be more than 50 feet (15 meters) tall, would not require opening/closing, and would allow train speeds of at least 90 miles per hour (mph).

Figure 1. PNB Alignment



NJT completed 100% design and has prepared procurement documents for a single construction contract to complete most of the project scope. Amtrak and NJT will complete other elements of the scope as documented in force account plans for the project.

The Project Sponsor is utilizing the Design, Bid, Build (DBB) project delivery method for one construction contract package including civil, structural, and systems, and for one contract to procure 25 commuter rail vehicles. The scope of work for construction and force account is summarized below.

GC.02 Main Railroad Alignment Contract Package (to be awarded):

- Preparatory Work/Wetlands – Temporary Access Roads, Property Acquisition, Construction Platforms, Northeast Finger Pier, Construction Staging Areas, Embankment and Surcharging, Environmental Remediation and Purchase of Wetlands Mitigation Credits, Retaining Walls
- River Spans over Hackensack River – Foundations and Superstructure (Network Tied Arches)
- West Shore Sub/Superstructures and Miscellaneous Facility Structures including Bridge over Newark Jersey City Turnpike and Retaining Wall A
- East Shore Sub/Superstructures and Miscellaneous Facility Structures including Bridge over Norfolk Southern Boonton Line
- Trackwork and Rail Systems (Communication and Signals, Electric Traction)
- Site Restoration and Cleanup (which includes Environmental Remediation/Cleanup)
- Demolition of Existing Bridge

Force Account Packages:

ET.01 – Amtrak Electrical/Traction Forces:
- Additional hangers for Qwest Newark-Jersey City to Boonton for tie-ins and installation of wire, hardware, and substation equipment

ET.02 – NJT Electrical/Traction Forces:
- Tie-ins and installation of wire, hardware, and substation equipment

C&S.01 – Amtrak Communication and Signal Forces:
- Installation of additional Central Instrument Huts (CIHs), bungalows, wire, hardware, wayside signal heads, testing, and all communication equipment

C&S.02 – NJT Communication and Signal Forces:
- Installation of additional CIHs, bungalows, wire, hardware, wayside signal heads, testing, Receiver Operating Characteristic (ROC) modifications, and all communication equipment

TP.01 – Amtrak Turnout Procurement

TP.02 – NJT Turnout Procurement

TA.01 – Amtrak Track Forces

TA.02 – NJT Turnout Track Forces

2.3 Project Cost Estimate

Based on the SCC workbook dated November 24, 2020, the Estimate at Completion (EAC) for the PNB project is $1.897 billion in YOE dollars as shown in Table 1.

Table 1. November 2020 NJT PNB Project Cost Estimate in SCC Format

SCC	Total Cost (Including Contingency $ in millions/YOE)	Allocated Contingency ($ in millions/YOE)
10. Guideway & Track Elements	$803.0	$103.9
40. Sitework & Special Conditions	$267.8	$27.5
50. Systems	$170.1	$15.5
60. Right-of-Way (ROW)	$24.3	$3.1
70. Vehicles	$71.3	$3.4
80. Professional Services	$206.8	$18.0
90. Unallocated Contingency	$173.4	
Subtotal	$1,716.7	$171.5
100. Finance Charges	$180.0	
TOTAL	**$1,896.7**	

Totals may not match due to rounding.

2.4 Project Schedule

NJT's submitted project schedule, IPS 34, data date (DD) September 1, 2020, projects the overall project duration to be 1,988 calendar days. The schedule projects Track 2 (revenue operations) New Alignment in service (IPS ID# ML1150) on November 17, 2025 and an overall project completion (IPS ID# ML1210) date of August 31, 2026. Assumptions for construction sequences, productivities, and work breakdown structure (WBS), as well as administrative activities, are clearly presented in the IPS and the supporting documents. The schedule includes no contingency or float.

Table 2 summarizes major milestone dates included in the Project Schedule.

Table 2. PNB Project Major Milestone Dates NJT IPS 34 (DD: 9/1/2020)

Key Milestones	Milestone Description	Start	Finish
FGA1110	GC.02 100% Final Design Documents Issued for Bid to Shortlisted GC Firms		11/6/2020
FGA1100	FTA Approval of FFGA		12/28/2020
ML1200	Notice-to-Proceed, GC-02	3/22/2021	
ML1100	Guideway Ready for Tracks		2/26/2024
ML1120	New Alignment Service TR.3	5/17/2025	
ML1150	New Alignment Service TR.2	11/17/2025	
ML1190	Substantial Completion		7/27/2026
ML1180	Swing Bridge Demolition		7/27/2026
ML1210	Project Completion		8/31/2026

2.5 Project Management Oversight Consultant

The FTA assigned David Evans and Associates, Inc. (DEA) as a PMOC in September 2016 to conduct a comprehensive RA and assess the project's Readiness to Enter Engineering. FTA requested DEA to conduct RA refresh and determine if the project is ready to execute the FFGA.

2.6 FFGA Requirements

An FFGA is a contract between the Project Sponsor and FTA. It details the rights and obligations of both parties relative to the project scope, budget, schedule, funding, and other terms. Review of the Project Sponsor's readiness is part of FTA's due diligence review prior to execution or modification of the FFGA and protects FTA's interests by providing a final check that all of the required predecessor activities have been satisfactorily completed and required project resources are available. The PMOC report that is a product of the readiness review becomes part of the package provided to Congress in conjunction with Congressional review of the proposed FFGA.

2.7 Evaluation Team

The FTA evaluation team includes representatives from Headquarters and the Region 2 office.

2.8 Documents Reviewed

Appendix D lists the documents reviewed by the PMOC in completing its readiness review.

3 PROJECT MANAGEMENT CAPABILITY AND CAPACITY

The PMOC followed the requirements of *OP 20 – Project Management Plan Review* and *OP 21 – Grantee Management Capacity and Capability Review* to assess the Project Sponsor's management organization, procedures, and capacity.

3.1 Project Management Plan

The FTA requires that Project Sponsors develop and implement a written PMP for any major capital project funded by FTA and demonstrate sufficient MCC to carry out the PMP. The PMOC conducted a detailed assessment of the full PMP and NJT's project organization in its review of the PNB project's readiness to enter the Engineering phase of project development. NJT provided a revised PMP with minor updates to organization charts and project budgets and funding sources in September 2020. The PMOC reviewed selected sections of the updated PMP and referenced sub-plans to assess the PMP's adequacy as a management tool for the execution of the FFGA for the PNB project. The PMOC assessed the project organization charts and selected PMP sub-plans to update its assessment of the Sponsor's MCC. The PMOC's review is based on the PMP requirements included in the 49 Code of Federal Regulations (CFR) Part 633, and indicated with italics below.

1. *A description of adequate recipient staff organization, complete with well-defined reporting relationships, statements of functional responsibilities, job descriptions, and job qualifications.*

PMOC Assessment:

The Project Sponsor's and Amtrak's project organization is sufficiently described in Section 2.0—Project Organization and Staffing section of the PMP. The section 2 of the PMP details the project management structure, the project participant roles and responsibilities, key staff position descriptions and reporting relationships, and key staff qualifications. Detailed organization charts and tables are included in the PMP. The PMOC concludes that the project organization is sufficient for execution of the FFGA.

NJT submitted a staffing plan, including personnel qualifications and resumes of key staff. A forecast of hours for each project component over the life of the project was also submitted. The submitted information, together with the PMP, demonstrates that the project will be adequately staffed. The PMP adequately addresses the availability of adequate physical resources to support the PNB project.

Based on the information supplied by the Project Sponsor, together with its performance on past projects and its performance to date for the PNB project, it is the professional opinion of the PMOC that NJT has sufficient MCC to successfully implement, manage, and the project. The key management positions of Program Manager for Quality and Program Manager for Risk should be filled, and the project organization charts updated to reflect these positions prior to award of the construction contract.

2. *A budget covering the project management organization, appropriate consultants, property acquisition, utility relocation, systems demonstration staff, audits, and such miscellaneous costs as the recipient may be prepared to justify.*

   PMOC Assessment:

   See Chapter 7 of this report.

3. *A construction schedule.*

   PMOC Assessment:

   See Chapter 6 of this report.

4. *A document control procedure and record-keeping system.*

   PMOC Assessment:

   A well-developed section detailing document control and record-keeping is included in subsection 4.1—Document and Records Control. This section refers to NJT's CP4 Manual Section 4.04, "Document Control" and also to the Construction Manager's Project Work Plan (PWP) Procedure No. PWP0014, "Document Control Procedures." There are further references to NJT's CP4 Manual in the section. The Document Control system is considered adequate for execution of the FFGA.

5. *A change order procedure that includes a documented, systematic approach to the handling of construction change orders.*

PMOC Assessment:

A change order procedure is outlined in Sections 4.4.1 Change Control at the Project Level and 4.4.2—Contract Change Orders. Change management is also discussed in Section 4.2.5.2 Requisitions/Change Orders under the Cost Control topic. Section 4.2.5.2 refers to a change order approval process. Section 4.4.2 includes reference to NJT's CP4 Manual Section 3.0, "General Administration" and Section 15.0, "Construction Management." It also refers to the Construction Manager's PWP Procedure No. PWP0019, "Change Management Procedures." The change order procedure is considered sufficient for execution of the FFGA.

6. *A description of organizational structures, management skills, and staffing levels required throughout the construction phase.*

PMOC Assessment:

Section 2.62—Construction Manager provides responsibilities and key roles for the construction management effort. Figure 2.8 is an organization chart that details construction management staff by area of responsibility, including named individuals for key positions and staffing levels for other management. The section refers to the Construction Manager's PWP for overall responsibilities. Section 8.1—Construction Management provides a high-level discussion of construction management and refers the reader to NJT's CP4 Manual Section 15.0, "Construction Management," and the Construction Manager's PWP (last revised September 28, 2017). Section 8.3 describes the requirements for Construction Inspection. The organization for construction is considered sufficient for execution of the FFGA. The PMOC notes that the planned Unit Price type of construction contract will require the accurate measurement, recording, and reconciliation of the actual quantities of installed materials to determine the amounts that should be paid to the contractor.

7. *Quality control and quality assurance programs.*

PMOC Assessment:

The Quality Assurance and Quality Control program is briefly described in Section 10.0 of the PMP. The Quality Management Plan (QMP) was also provided as a sub-plan (dated September 2020) and the CM's Quality Assurance/Quality Control Procedure (QA/QCP) dated November 2019 was provided for review. Section 10.0 of the PMP identifies the PMQ as the key NJT staff member responsible for quality. The PMQ is described as reporting directly to the Assistant Executive Director of Capital Planning and Programs (CP&P), which provides an appropriate independent reporting relationship to NJT senior management for the quality function. The section further states that the responsibility for Quality on the PNB project has been delegated to the CM's Quality Manager (QM), who reports directly to the PMQ. In the opinion of the PMOC, this delegation of responsibility for project-level quality functions is appropriate if the independent reporting relationship is maintained. The PMOC finds that the QMP is sufficient for execution of the FFGA.

Prior to award of the construction contract, NJT should:

- Fill the vacant PMQ position.
- Update the PMP organization charts to be consistent with the Quality section of the PMP and the QMP.
- Revise CM's QA/QCP to reflect the reporting relationships documented in the QMP.

8. *Plan for materials testing.*

   PMOC Assessment:

   Section 8.8—Materials Testing outlines materials testing policies and procedures. The reader is referred to NJT's CP4 Manual Section 4.0, "Quality Assurance/Quality Control" and Section 15.11, "Construction Quality," as well as the CM's PWP Procedure No. PWP0020, "Quality Assurance/Quality Control Procedures." These procedures are adequate for execution of the FFGA.

9. *Plan for internal reporting requirements including cost and schedule control procedures.*

   PMOC Assessment:

   Sections 4.0—Project Controls Management describes internal reporting requirements for cost and schedule control in satisfactory detail. The reporting process is considered adequate for execution of the FFGA.

10. *Criteria and procedures to be used for testing the operational system or its major components.*

    PMOC Assessment:

    Section 9.0—Start-up and project completion on page 102 is a placeholder until this section is made available in the next PMP update after award of the FFGA.

11. *Periodic updates of the Plan.*

    PMOC Assessment:

    A commitment to provide PMP updates is included in Section 1.8—Purpose of the PMP on page 9.

12. *The recipient's commitment to make monthly submission of project budget and project schedule to the Secretary.*

    PMOC Assessment:

    The commitment to monthly updates of budget information is included Section 4.2.8—FTA Reporting.

In addition, the PMOC assessed the design management component of the PMP as described below.

13. *A design management process encompassing Preliminary Engineering, Final Design, and Design Services During Construction (DSDC).*

PMOC Assessment:

Section 5.0—Design Management and Control details the management and control of the project design. The PMOC reviewed the design management process and found it to be acceptable and consistent with NJT's PNB design development. It is the PMOC's opinion that the completed design meets the project's stated goals and proportionally improves the capacity and operational objectives established in the FEIS with construction of the northern bridge. The PMOC's review found that many elements of the Design Management and Control section of the PMP need to be updated to reflect the completion of final design and the start of DSDC.

PMP Sub-Plans

Sub-plan documents are referenced in the PMP and contain additional detail and information, which can more easily be documented, updated, and referenced in stand-alone documents. Table 3 provides a listing of PMP sub-plans submitted by the Project Sponsor as of September 2020. The table includes the document revision and status pursuant to PMOC review and comment. Table 3 does not list the numerous procedures that are also developed and implemented by the Project Sponsor to further support the function, integration, and execution of the various plans.

Table 3. PMP Rev. 3.0 Sub-plans

Sub-plan	Revision No.	Date
Force Account Plan	1	September 2020
Quality Management Plan (QMP)	0	September 2020
Real Estate Management Plan (RAMP)	0	March 2020
Rail Fleet Management Plan (RFMP)	0	September 2014
Safety and Security Management Plan (SSMP)	1	November 2017
Project Organization and Staffing Plan	0	November 2017

PMOC Assessment

While subsequent revisions will be necessary to further enhance the PMP before the start of construction, the PMOC has nevertheless found the current PMP to be in compliance with the FTA requirements for a project ready for execution of the FFGA. The PMOC recommends that PMP Revision 3.0, dated September 18, 2020, be approved as a deliverable for execution of the FFGA, subject to the requirement that the PMP be thoroughly reviewed and updated prior to award of construction contract GC.02. The project sponsor has met the technical requirement of FFGA.

3.2 Force Account Plan

The FTA requires the Project Sponsor to provide a Force Account Plan that describe the uses of its own labor forces to accomplish the critical cutover work during the track outages. NJT submitted Force Account Plan rev 1.0 in September 2020. The details in the Force Account Plan include Amtrak providing labor, equipment, and material for the cutover of track, signal, communications, electric traction, and reconfiguring of the interlocks to direct all services across

the new Portal North Bridge. This includes providing equipment and material to be installed by the contractor.

PMOC Assessment

The use of the Amtrak force account staff is justified by the experience and expertise that are unique to the project. The Amtrak staff is familiar with the unique issues of the site and have the spare parts and equipment needed to perform the cutover work during the temporary outages. As the regular maintenance staff in this section of the NEC, they can efficiently complete the test and return the line to service after each outage. This work is expected to be performed in nine stages.

The Force Account Plan is adequate for execution of the FFGA. Prior to the start of construction, the Force Account Plan should be updated to provide details and quantities of the labor, equipment, and material required for the scope of work. The Project Bid Set (construction drawings), Technical Provisions, and the Plan should be consistent in describing the responsibilities of the contractor and the force account work to be performed by Amtrak, NJT, and third-party subcontractors.

3.3 Quality Assurance/Quality Control Plan

The FTA requires a Project Sponsor undertaking a major capital program to prepare a PMP that includes a QA/QC Plan. The development of a project QA/QC Plan should be an outgrowth of a functioning quality management system. A comprehensive quality management system is composed of a written quality policy, a written plan, written procedures, a management that supports and takes responsibility for quality, and personnel who will undertake quality assurance and quality control activities. The required elements of a QA/QC Plan are stipulated in FTA-IT-90-5001-02, *Quality Assurance and Quality Control Guidelines*, dated February 2002.

The PMOC followed the requirements outlined in *OP 24 – QA/QC Review*, dated September 2015, to evaluate the Project Sponsor's QMP, Revision 1, dated September 2020.

PMOC Assessment

The QMP includes Portal Partners Quality Management Plan as Appendix B (QMP B) and Construction Manager QA/QC Plan as Appendix C (QMP C). The PMOC determined that each of the following OP 24 categories was satisfactorily addressed:

- Quality Management
- Document Control
- Design Control
- Procurement
- Construction/Inspection
- Operations, Startup, and Testing

Revision 1 of the QMP meets all FTA requirements and industry standards and makes references to the QMPs for the Engineer of Record and the CM team, as well as other project-specific CM reference documents for quality-related procedures.

It is essential for the quality function on a project to have an independent reporting relationship to senior agency management, separate from the management team responsible for scope, cost, and schedule control. This reporting relationship is provided in the QMP through the NJT PMQ. The QMP identifies the PMQ as the key NJT staff member responsible for the quality function with a direct reporting relationship to the Assistant Executive Director, CP&P. The PMP calls for the CM's Quality Officer to report directly to the PMQ, with an indirect reporting relationship to the CM's PM and NJT's PM.

The CM's Quality Assurance/Quality Control Procedure (QA/QCP) provides a detailed plan for quality management at the project level. The procedures meet all FTA requirements for quality management. The QA/QCP identifies the CM's Quality Assurance/Quality Control Officer (QA/QCO) as the key quality position in the project organization, with the contractor's Quality Control Manager (CQCM) reporting directly to this position.

The PMOC recommends that QMP Revision 1, dated September 2020, be accepted as a deliverable for execution of the FFGA, subject to completion of required revisions to the CM's QA/QCP and the PMP prior to award of the GC.02 construction contract. The PMOC recommends that the vacant position of Program Manager of Quality be filled and properly indicated on all project organization charts and the list of key project personnel.

3.4 Safety and Security Management Plan

The FTA requires a Project Sponsor undertaking a major capital program to prepare a PMP that includes an SSMP. The Project Sponsor developed an SSMP according to the most recently available FTA guidance, *Safety and Security Management Guidance for Major Capital Projects*, FTA C 5800.1, dated August 1, 2007. The Project Sponsor has developed an SSMP to document the PNB project's approach to address safety and security requirements. For construction, the contractor will be required to develop a Safety and Security Plan in accordance to the Project Safety and Security Certification Plan. For operation and maintenance, Amtrak will implement a System Safety Program Plan (SSPP) and a System Security and Emergency Management Preparedness Program Plan specific to the PNB.

PMOC Assessment

The PMOC assessed the SSMP using criteria identified in Items 1 through 11 in the review checklist in *OP 22 – Safety and Security Management Plan Review*, dated September 2015, which is also listed in Circular 5800.1, Pages II-4 and II-5, and against the specific section-by-section requirements identified in C5800.1, Chapter IV. The PMOC review found that NJT's SSMP Revision 1.0, dated November 2017, contains all sections specified in FTA Circular 5800.1, with the minimum content required for Entry into Engineering either included or implied. The PMOC review found that the staffing plan provides adequate safety and security technical capacity to cover all activities likely during the construction phase. The PMOC recommends that SSMP Revision 1.0, dated November 30, 2017, be accepted as a deliverable for execution of the FFGA.

3.5 Real Estate Acquisition and Management Plan

The PMOC followed the requirements outlined in *OP 23 – Real Estate Acquisition and Management Plan Review,* dated September 2015, to assess and evaluate the Project Sponsor's Real Estate Acquisition and Management Plan (RAMP), Revision 2.0, dated March 2020. The review process consisted of identifying references for assessment of the plan contents and performing a review as needed to validate claims made by the Project Sponsor in the RAMP. The objectives of an OP 23 review are:

- Evaluation and continuous oversight of the Project Sponsor's RAMP, including real estate acquisition, project scope, estimated cost, overall schedule and critical path, and the relocation plan.
- Evaluation of the real estate schedule for completeness, adequacy, consistency, appropriateness of level of detail given the phase, identification of risks inherent in the schedule, and evaluation of the impact of these on project scope and cost.
- Characterization of the Project Sponsor's ability to meet the requirements of federal laws, regulations, and guidance when acquiring real estate.
- Determination of the Project Sponsor's compliance with all governing requirements during the implementation phase of the real estate acquisition program.

PMOC Assessment

Each of the following elements of the RAMP was reviewed according to the requirements of OP 23 and found to be adequately addressed:

- Organizational Structure
- Document Control
- Property Management Plan
- Acquisition Plan
- Ownership and Title Information
- Appraisal
- Establishment of Offer of Just Compensation
- Negotiations
- Closing/Escrow
- Condemnation
- Disposition Plan
- Relocation Assistance Plan
- Staffing and Administration
- Appeals
- Third Party Real Estate Agreements

The PMOC recommends that the RAMP Revision 2.0, dated March 2020, be accepted as a deliverable for execution of the FFGA.

3.6 Rail Fleet Management Plan

The PMOC followed the requirements outlined in *OP 37 – Fleet Management Plan Review*, dated September 2015, to assess and evaluate the Project Sponsor's Rail Fleet Management Plan (RFMP), dated September 2014.

PMOC Assessment

The PMOC reviewed the September 2014 RFMP to assess compliance with appropriate FTA guidance and found that the document generally follows FTA's eight-step process for operating spare ratio computation.

Although NJT is planning to procure 25 new rail vehicles (identified as "Heavy Rail" in the SCC workbook) to provide service after project completion, the RFMP should be updated to reflect the use of the new rail vehicles. The operations and maintenance portion of the RFMP defines activities related to service operations and planned management and maintenance of the fleet, and also provides substantial information regarding service demand. Additional detail on these topics should be provided in the next update of the RFMP. Additional details on several other topics will be needed as well, such as service demand and operations, utilization of revenue vehicles, anticipated vehicle maintenance and availability, and fleet management. The PMOC recommends that the NJT's RFMP, dated September 2014, be accepted as a deliverable for execution of the FFGA.

3.7 Conclusion

The PMP includes all the subject areas recommended in FTA Circular 5200.1 and the Project and Construction Management Guidelines and is sufficient for the FFGA stage of project development. The PMOC concludes that the Project Sponsor and Amtrak have demonstrated sufficient MCC to execute the FFGA, advertise the remaining construction contract for the PNB project, and prepare for award of the contract.

While the PMP and the submitted sub-plans and the Project Sponsor's MCC are sufficient for execution of the FFGA, the PMOC recommends that the Project Sponsor complete the following prior to award of the construction contract:

- Fill the positions of PMR and PMQ, which are described in the PMP and the Quality Management Plan, but not included in the project organization charts or the list of key project staff.
- Revise the CM's QA/QCP to have the CM's QA/QCO report to the PMQ, rather than the CM's PM. Independent reporting of the quality function is crucial to assuring quality is not compromised by budget and schedule demands.

Prior to construction, the PMP should be comprehensively reviewed and updated to assure that the information provided is up-to-date and consistent with the sub-plans and the planned construction contract. All PMP sub-plans should be reviewed and updated to assure consistency with the current project status, the planned project implementation approach, and the PMP. The PMOC recommends that a revised PMP and sub-plans be issued prior to award of the construction contract.

4 SCOPE

The PMOC followed the requirements outlined in *OP 32C – Project Scope Review*, dated September 2015, to verify that the scope of the PNB project is:

- Represented by the totality of all contract plans and specifications;
- Internally consistent between the disciplines;
- Defined to the level appropriate for the project developed at bid documents; and
- Consistent with the level of detail provided in the cost estimate and project schedule.

4.1 Design

It is the opinion of the PMOC that the level of detail provided in the project design criteria is relevant and sufficient to provide design control over the project. It is assumed that the Project Sponsor reviewed and made required updates to the design criteria prior to the final development of the construction contract bid documents submitted to the PMOC for review.

4.2 Value Engineering

The Project Value Engineering (VE) Report, dated February 5, 2010, was based on the 30 percent design of the project. A formal VE workshop was conducted on January 19, 2010, in conformance with the Project Sponsor's policy and requirements. A total of 29 VE proposals were considered, and the potential benefits of each were reviewed and considered by the design team. It is the opinion of the PMOC that no further VE evaluation is needed in finalizing the bid documents of the GC.02 contract.

4.3 Coordination Review – Third-party Agreements

Third-party agreement refers to those agreements entered into by the Project Sponsor with a party other than FTA that are necessary to facilitate the financing, design, permitting, construction, and operation and maintenance of a federally funded capital transit project. The PMOC review was focused on the technical details of each critical third-party agreement, an evaluation of satisfactory continuing control, and the commitments made with respect to the proposed scope, cost, and schedule.

The Project Sponsor has identified and established critical third-party agreements required for the project. A total of 51 third-party agreements have been identified, and 16 were deemed to be critical. The status of the critical third-party agreements is listed in Appendix A of this report.

The PMOC identified 16 critical third-party agreements, including:

- 7 Utility Relocation Agreements within public and private agencies
- 3 Utility Relocation Agreements on NEC
- 1 Real Estate Acquisition Agreement
- 3 Amtrak Project Agreements
- 2 Project Funding Agreements

The PMOC determined and confirmed that all 16 critical third-party agreements have been resolved and executed.

4.4 Project Delivery

The Design-Bid-Build GC.02 construction package includes bridges, retaining walls, temporary access roads and construction platforms, roadway construction, drainage structures, utility relocations, grading, excavation and disposal of hazardous materials, rail systems and track, signals and communication, catenary structure and foundation, traction power and transmission line. Most of the project is expected to be located outside of the existing Amtrak ROW.

4.5 Constructability Review

A detailed constructability report was prepared for the project. The report was developed with the assumption that two new river crossings would be built over the Hackensack River. The scope has since been reduced to just the northern crossing. The report includes detailed construction staging and phasing strategies to minimize track outages and train delays, site-specific construction sequences and methods on earthwork, procurement on long-lead-time materials such as the steel network tied arch, and approach to handling hazardous materials in advance of foundation construction activities. In addition to the constructability report, extensive geotechnical investigation was conducted within the project limits, and a detailed multi-volume Geotechnical Data Report, dated December 12, 2012, and geotechnical recommendations for bridge foundation design were provided in the Final Foundation Design Report, dated January 31, 2013.

Assumptions made in the constructability report have been modified to reduce the duration from 2,300 calendar days to 2,000 calendar days. A proposed incentive program would reward the contractor for further time savings, resulting in 1,820 calendar days of construction. With the reduced duration, the contractor is expected to have multiple crews, material storage, and equipment and concurrent construction activities on the access roads and construction platforms to meet the completion date.

4.6 PMOC Assessment

The PMOC finds that appropriate constructability reviews have been conducted to support the execution of the FFGA. As the project moves toward award of the construction contract, additional construction details should be developed and the scope included in the construction bid documents should be reviewed to confirm it is consistent with the project schedule assumptions, cost estimate, and Force Account Plan. Assignments in the Force Account Plan should be consistent with the Bid Set and Technical Provisions. Discrepancies between the Bid Set and the Technical Provisions should also be addressed. It is expected that the Bid Set and Technical Provisions will be updated between now and when the project is advertised for bid.

4.7 Conclusion

It is the opinion of the PMOC that the current scope of the PNB project is sufficiently defined in the current Bid Set and Technical Provisions to support execution of the FFGA. Additional revisions to the Bid Set and Technical Provisions for consistency between the two documents are expected. The current scope of the PNB project meets the FTA guidance and requirements necessary to advance the project to FFGA.

5 PROJECT SCHEDULE

The PMOC followed the requirements outlined in *OP 34 – Project Schedule Review,* dated September 2015, to assess and evaluate the Project Sponsor's project schedule. The schedule review evaluates the efficiency and effectiveness of the Project Sponsor's project implementation during the project life cycle. The schedule review validates the inclusivity of the project scope and the characterization of individual project elements within the current phase of the project. It also validates the program management's readiness to enter and implement the next major program phase (which is the Engineering phase). The review of the project schedule addresses seven subcategories:

- Schedule
- Technical Review
- Resource Loading
- Project Calendars
- Interfaces
- Project Critical Path
- Critical Areas of Concern

5.1 PMOC Assessment

The PMOC reviewed NJT's IPS Rev. 34, dated September 16, 2020 (with a data date of September 1, 2020), which projects total project completion, including demolition of the existing bridge, on August 31, 2026. A summary schedule of the PNB IPS Rev.34 is included in Appendix B.

Assumptions for construction sequences, productivities, and WBS, as well as administrative activities, are clearly presented in the IPS and the supporting documents. The PMOC determined that the Project Sponsor met the requirements for execution of the FFGA related to *"completeness, adequacy, consistency, and level of detail."* The submitted schedule includes no float. FTA requires that float equaling 25 percent of the project duration or float sufficient to provide 65 percent confidence in the projected completion date, whichever is larger, to be included in the projected completion date for the FFGA. Incorporating the required float in the NJT schedule results in a projected project completion date of June 30, 2028.

5.2 Conclusion

Although the project FTA P65 completion date is February 2028, NJT has shown a project completion date of June 30, 2028 in their schedule and this meets the FFGA requirements.

6 PROJECT COST

On November 24, 2020, NJT updated the project cost estimate and submitted it to the FTA for review. The total project cost reported in SCC format, is $1.897 billion in YOE dollars, $1.717 billion without finance charges. The finance charges are $180 million. The updated project cost is shown in Appendix C.

The PMOC followed the requirements outlined in *OP 33 – Capital Cost Estimate Review,* dated September 2015, to assess and evaluate the Project Sponsor's cost estimate. Specifically, the review addressed:

- Soundness of the Project Sponsor's cost estimating methods and processes compared with proven professional quantity surveying and cost estimating practices for projects of this scale;
- Congruence of the project cost estimate with the project scope and schedule; and
- Reliability of the estimate for procurements, contract bids, and contract closeout.

6.1 PMOC Assessment

The PMOC evaluated the cost estimates for each SCC for mechanical soundness and consistency. These mechanical checks are used to determine whether there are any material inaccuracies within the estimate. The November 2020 SCC Estimate was found to be mechanically correct in the tabulation of the unit cost, application of factors, and translation to the SCC workbook. The PMOC randomly sampled cost estimate line items to determine whether the cost estimate backup cross-walked into the SCC workbook. In each instance, the PMOC found that the calculated values translated to the SCC workbook and back to the cost estimate backup without variance or mechanical issues.

The following items summarize the PMOC's assessment of the November 2020 SCC Estimate according to the requirements of OP 33:

- The PMOC concludes that the estimate is consistent with the project scope identified in the FEIS and the ROD.
- The PMOC has characterized the project cost data as an Association for the Advancement of Cost Engineering (AACE) "Class 3" estimate due to the unit cost style of estimate. To date, the Project Sponsor has not awarded a contract for any portion of the $1.897 billion YOE project cost estimate.
- Soundness and reliability of the Project Sponsor's estimate: The Project Sponsor's November 2020 SCC Estimate was prepared utilizing standard industry practices combined with Microsoft Excel spreadsheet software and a reasonable and reliable database. The database contains adjusted local rates that include construction, environmental, real estate, permitting, bonds and insurance, and related general conditions and soft cost markup factors. PMOC reviewed the project budget for congruence, incorporation, and coordination of the project scope and schedule and found the project budget to fall within a reasonable range.
- The PMOC reviewed and concluded that the annual rate of escalation used by the Project Sponsor for escalation in its November 2020 SCC Estimate was consistent with the national rate of escalation.
- The PMOC verified that the Project Sponsor included an appropriate level of detail and supportable justification in the Basis of Estimate for general conditions costs.
- The cost estimate included some line item lump-sum costs that contained minimal quantification or minimal backup. The lump-sum line items total just under $100 million,

or 15 percent of the total project cost estimate. The PMOC found the use of lump-sum line items acceptable and not excessive for a cost estimate prepared before FFGA Readiness.

6.2 Conclusion

The PMOC concludes that the estimate is consistent with the project scope identified in the FEIS and the ROD. The PMOC did not find any significant discrepancies between the IPS and cost estimate line items within the SCC workbook.

The review of the cost estimate revealed that each of the major elements for the project included an estimated cost. As noted within this report, the PMOC checked a sampling of quantities from the cost estimate. The values were found to be consistent with the scope drawings. Quantity take-offs were performed by the Project Sponsor's estimating team.

The PMOC determined that the current cost estimate is mechanically and fundamentally sound and reasonable because it meets the FTA guidance and requirements necessary to advance the project into the Engineering phase.

The PMOC determined that the annual rate of escalation used by the Project Sponsor to estimate material, labor, and equipment costs is consistent with the national rate of escalation of 3.5 percent annual escalation.

It is the PMOC's professional opinion that the submitted cost estimate is mechanically and fundamentally sound and reasonable and that it meets the FTA guidance and requirements necessary for execution of the FFGA.

7 PROJECT RISK AND CONTINGENCY REVIEW

The PMOC performed a comprehensive FTA-sponsored RA of the PNB Project at the Entry to Engineering Stage of development. The PMOC performed a refresh of the RA based on NJT's documents received during August and September 2020. The objective of the RA refresh was to update the evaluation of the risks associated with the PNB project to quantify the range of impacts from the major project risks in compliance with the FTA requirements for award of the FFGA. The RA refresh was performed in accordance with the FTA's PMOC *OP 40b – Risk Management Review*, dated September 2015.

7.1 PMOC Assessment

Project Cost

Figure 2 shows the results of the FTA cost risk analysis for the PNB project conducted in September 2020. The FTA cost risk analysis indicated the project cost with finance charges to be $1.888 billion (P65). The FTA P65 Target was based on $170 million of finance charges from an earlier NJT budget estimate. Due to a change in project cost from September 2020, NJT updated the financial plan that subsequently increased the September 2020 finance charges by $9 million. Therefore, the FTA P65 Target is adjusted to $1.897 billion to account for the increase to finance charges.

Project Schedule

The Project Sponsor's schedule forecasts a project completion date of August 31, 2026, with no float included in the forecast dates. The results of the schedule risk assessment are summarized in Figure 3. The FTA's schedule risk profile indicates that the completion date of the PNB project is October 2027 (P65). FTA's guidance requires a minimum float of 25 percent of the remaining project duration in establishing the project completion for the FFGA. Including 25 percent float in the forecast for the Project Completion results in a date of February 2028. Although the project FTA P65 completion date is February 2028, NJT has since revised the project completion date to June 30, 2028 in their schedule and this meets the FFGA requirements.

Figure 2. Cost Risk Analysis Results Graph

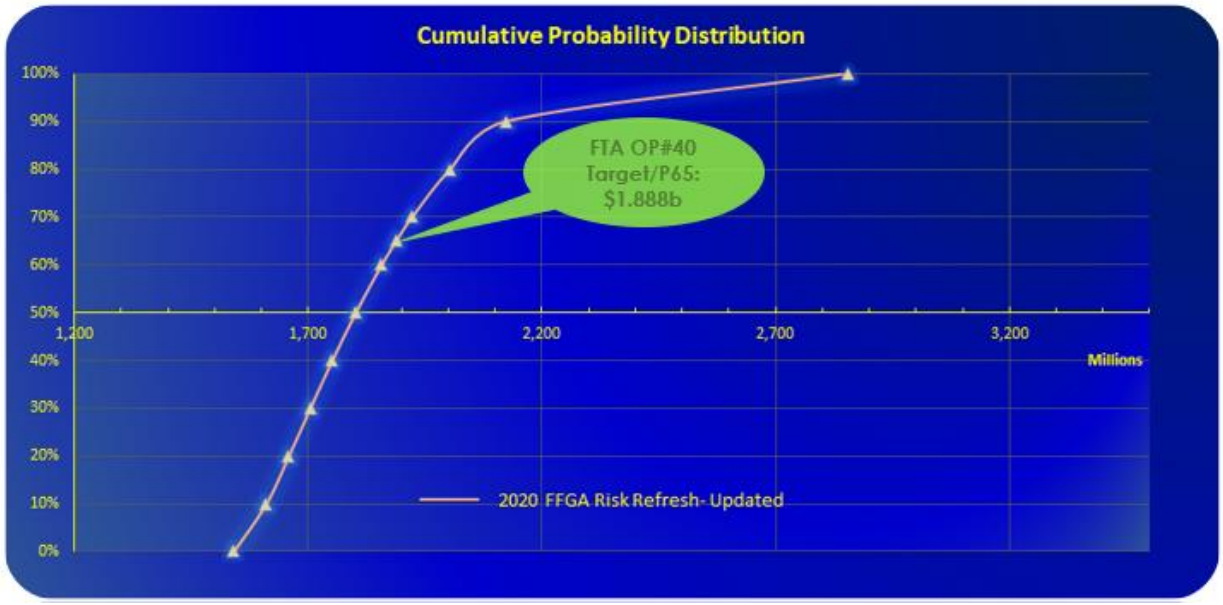
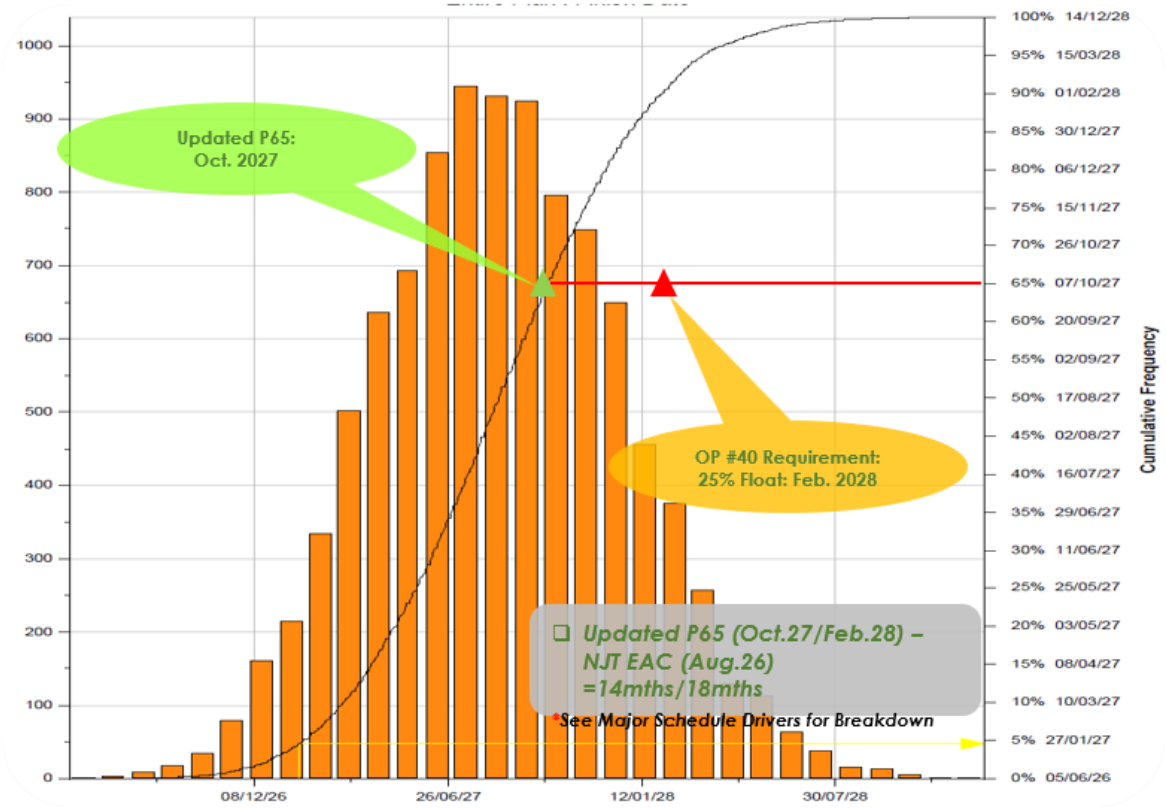


Figure 3. Schedule Risk Model Results Graph



7.2 Conclusion

The likely cost range for the project excluding finance charges, is between $1.580 billion (P40) and $1,832 billion (P80). The likely cost of the project (P65) is $1.717 billion, excluding finance costs. The likely project completion date is between July 2027 (P40) and December 2027 (P80). The likely projection completion is October 2027 (P65). The OP 40 requirement for a minimum float of 25 percent of the project duration results in a project completion of February 2028. Although the project FTA P65 completion date is February 2028, NJT has shown a project completion date of June 30, 2028 in their schedule and this meets the FFGA requirements.

8 CONCLUSION

The PMOC has determined that NJT has met FTA OP52 Readiness to Execute FFGA requirements for the PNB project with a budget of $1.897 billion in YOE dollars including finance charges ($1.717 billion excluding finance charges). The total contingency included in the PNB project cost represents 25 percent of the project cost before the finance charges and contingencies are added. Although the project FTA P65 completion date is February 2028, NJT has shown a project completion date of June 30, 2028 in their schedule and this meets the FFGA requirements. The PMOC has determined that the Project Sponsor has demonstrated sufficient MCC to execute and FFGA and that:

- All technical aspects of the FFGA are complete and accurate.
- The FFGA attachments accurately represent the project's Scope, Schedule, and Costs.

- All critical third-party agreements are complete.

The PMOC finds that the project sponsor has met the technical requirements of FFGA based on the findings of this Readiness Review.

Prior to award of the construction contract, the PMOC recommends that NJT:

- Fill the positions of PMR and PMQ, which are described in the PMP and the Quality Management Plan, but not included in the project organization charts or the list of key project staff.
- Revise the CM's QA/QCP to have the CM's QA/QCO report to the PMQ, rather than the CM's PM. Independent reporting of the quality function is crucial to assuring quality is not compromised by budget and schedule demands.
- Review and update the PMP and sub-plans to assure that the information provided is accurate and consistent and that it reflects the current project status and the planned project implementation approach.

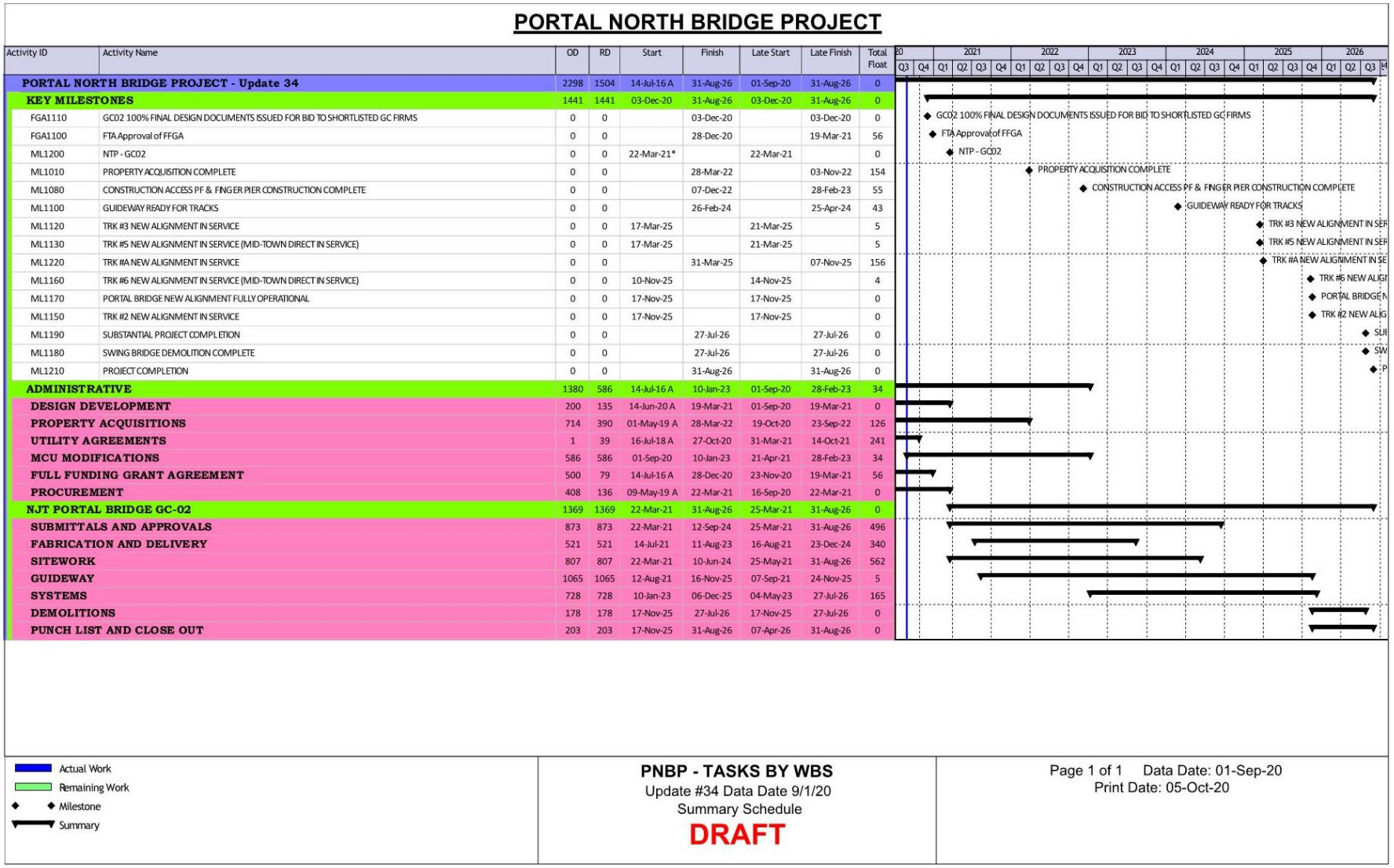
Appendix A - List and Status of the Critical Third-party Agreements

NJ TRANSIT THIRD PARTY AGREEMENT STATUS AND CRITICALLITY LIST									*FTA Review*	
Item ID #	Owner or Impacted Party	Type of Impact or Transaction	Project Location	Description of Work or Professional Services Required	Status	Criticality – Current Impact on the Project			*FTA Determination*	*FTA Review Comments*
						NJT Determination	Comments			
U - Utility Relocation Agreements - 14 (9 relocated, and 5 protected (P) but no relocated)										
2	Kearny Water Department	24" Watermain 8" Watermain	Newark / Jersey City Turnpike	Construct new NEC Bridge over road 24" - No Utility Relocation Required	· **Agreement Executed** · September 17th, 2020	· Critical * · Agreement awaits KWD signing		1	**Critical**	No Comments. No grantee action needed
				8" - to be rerouted by NJT Contractor		· Start of Utility work 4Q 2021				
8	Verizon	Telecom Services Aerial Cables	Belleville Turnpike	Build new NEC Bridge over roadway Aerial Cables relocated to ductbank	· **Agreement Executed** · May 1, 2020	· Critical * · Start of Utility work 4Q 2021		2	**Critical**	No Comments. No grantee action needed
9	United Fiber & Data	Telecom Services FO Aerial Cables	Belleville Turnpike	Build new NEC Bridge over roadway Aerial Cables relocated to ductbank	· **Agreement Executed** · May 26,2020	· Critical * · Start of Utility work 4Q 2021		3	**Critical**	No Comments. No grantee action needed
~~10~~	~~AT&T (Core)~~	~~Telecom Services~~ ~~FO Aerial Cables~~	~~Belleville Turnpike~~	~~Build new NEC Bridge over roadway Aerial Cables relocated to ductbank~~	· **No need for separate agreement-Per AT&T** · occupies Verizon Pole via Lease · Verizon has approved Agreement	· ~~Critical *~~ · ~~Expect approval within 3Q 2020~~ · ~~Start of Utility work 4Q 2021~~				
11	AT&T – Teleport Communications	Telecom Services FO Aerial Cables	Belleville Turnpike	Build new NEC Bridge over roadway Aerial Cables relocated to ductbank	· **Agreement Executed** August 25th,2020 · occupies Verizon Pole via Lease · Verizon has approved Agreement	· Critical * · Expect approval within 3Q 2020 · Start of Utility work 4Q 2021		4	**Critical**	No Comments. No grantee action needed
12	Comcast Communications	Telecom Services FO Aerial Cables	Belleville Turnpike	Build new NEC Bridge over roadway Aerial Cables relocated to ductbank	· **Agreement Executed** · May 20,2020	· Critical * · Start of Utility work 4Q 2021		5	**Critical**	No Comments. No grantee action needed
13	Crown Castle Fiber, LLC	Telecom Services FO Aerial Cables	Belleville Turnpike	Build new NEC Bridge over roadway Aerial Cables relocated to ductbank	· **Agreement Executed** July 1st, 2020	· Critical * · Start of Utility work 4Q 2021		6	**Critical**	No Comments. No grantee action needed
14	NJ Department of Transportation	Telecom Services FO Aerial Cables	Belleville Turnpike	New ductbank built underneath road Aerial Cables relocated to ductbank	· **Final Agreement reached** September 17, 2020	· Critical * · Expect approval within 3Q 2020 · Start of Utility work 4Q 2021		7	**Critical**	Executed agreement provided on 10/27/2020. No grantee action needed.

NJ TRANSIT THIRD PARTY AGREEMENT STATUS AND CRITICALLITY LIST									*FTA Review*	
						Criticality – Current Impact on the Project				
Item ID #	**Owner or Impacted Party**	**Type of Impact or Transaction**	**Project Location**	**Description of Work or Professional Services Required**	**Status**	**NJT Determination**	**Comments**		***FTA Determination***	***FTA Review Comments***
AU - Amtrak – Northeast Corridor Utility Relocation Agreements - 3										
1	Verizon (MCI) (MAFORS)	Telecom Services Aerial Fiber Optic (FO) Cables	Existing Portal Bridge	Relocate FO Cable to Temp FO Line	· Orig Agreement signed 7/5/94 · Vz relocates at its own expense · Relocation notice sent Jan 2018 · Amtrak awaiting MCI response	· Critical * · Eval of Relocation plan required · Construction start 2Q 2022		8	**Critical**	No Comments. No grantee action needed
2	CenturyLink (CL) (Qwest)	Telecom Services Aerial FO Cables	Hackensack River	Relocate FO Cable to Temp FO Line	· Orig Agreement signed 4/29/99 · CL relocates at its own expense · Relocation notice sent Jan 2018 · Amtrak awaiting CL response	· Critical * · Eval of Relocation plan required · Construction start 2Q 2022		9	**Critical**	No Comments. No grantee action needed
3	Zayo Group, LLC	Telecom Services Aerial FO Cables	Existing Portal Bridge	Relocate FO Cable to Temp FO Line	· Orig Agreement signed 5/1/2000 · Zayo relocates at its own expense · Relocation notice sent Jan 2018 · Amtrak awaiting Zayo response	· Critical * · Eval of Relocation plan required · Construction start 2Q 2022		10	**Critical**	No Comments. No grantee action needed
RE - Real Estate Acquisition Agreements - 18										
1	Norfolk Southern Open Space Inst.	Construction Access Road Use	Parcel 210 Boonton Line (BL)	Access Road to be stoned, graded and maintained during construction	Agreement executed on July 29, 2020	· Critical * · OSI schedule to acquire BL · OSI location of "Rail – to -Trail" · Access needed - 2Q 2021		11	**Critical**	No Comments. No grantee action needed
RC - Regulatory Compliance – Permits - 5										
AA - NJ Transit – Amtrak Agreements - 9										
1	NJ Transit Amtrak	Proj Development Agreement Term Sheet	---	Outlines Roles, Responsibilities and Obligations of NJ Transit and Amtrak	· **Term Sheet Executed** · May 15, 2020	· Critical * · Approved - 2Q 2020		12	**Critical**	No Comments. No grantee action needed
2	NJ Transit Amtrak	Proj Development Agreement	---	Finalizes Roles, Responsibilities and Obligations of NJ Transit and Amtrak	· Mtg's and Discussions underway · Items: Fund'g, Overruns, CO's, CM · Intend to execute PDA June 2020	· Critical * · Sets forth responsibility, obligtn's · Finalizes funding, payments, ownership		13	**Critical**	Comments resolved. Agreement executed on November 27, 2020

NJ TRANSIT THIRD PARTY AGREEMENT STATUS AND CRITICALLITY LIST									*FTA Review*	
tem ID #	Owner or Impacted Party	Type of Impact or Transaction	Project Location	Description of Work or Professional Services Required	Status	Criticality – Current Impact on the Project			*FTA Determination*	*FTA Review Comments*
						NJT Determination	Comments			
						· Governs mngt & control of work				
3	NJ Transit Amtrak	Amendment to NEC Services Agreement	---	NECSA Agreement to be amended in order to implement the increase in capacity resulting from the Project	· Reference Document in the PDA · Amendment under discussion	· Critical * · Determines O&M requirements · Expected approval by 4Q 2020 · NEC operational 2Q 2025		14	**Critical**	Comments resolved. Agreement executed on November 27, 2020
PF - Project Funding Agreements - 2										
1	NJ Economic Development Authority	Sale of Bonds	---	Requires the sale of Bonds to provide up to $600 in funding for the Project	· EDA Board Resolution appv'd 6/18 · NJT Board Resolution appv'd 6/18 **Agreement executed August 2020**	· Critical * · Financing terms will be finalized prior to issuance · NJEDA final approval of bond documents scheduled for July 14, 2020		15	**Critical**	No Comments. No grantee action needed
2	NJ Turnpike Authority	Toll Receipts	---	Requires the provision of $187.24M in funding for the Project	· NJTA Board Approved July 2019 · NJT Board Approved July 2019 · **Agreement Executed** September 2020	· Critical * · Funds conditioned upon receipt of FFGA		16	**Critical**	No Comments. No grantee action needed

Appendix B - PNB Summary Level Schedule



PORTAL NORTH BRIDGE PROJECT

Activity ID	Activity Name	OD	RD	Start	Finish	Late Start	Late Finish	Total Float
PORTAL NORTH BRIDGE PROJECT - Update 34		2298	1504	14-Jul-16 A	31-Aug-26	01-Sep-20	31-Aug-26	0
KEY MILESTONES		1441	1441	03-Dec-20	31-Aug-26	03-Dec-20	31-Aug-26	0
FGA1110	GC02 100% FINAL DESIGN DOCUMENTS ISSUED FOR BID TO SHORTLISTED GC FIRMS	0	0		03-Dec-20		03-Dec-20	0
FGA1100	FTA Approval of FFGA	0	0		28-Dec-20		19-Mar-21	56
ML1200	NTP - GC02	0	0	22-Mar-21*		22-Mar-21		0
ML1010	PROPERTY ACQUISITION COMPLETE	0	0		28-Mar-22		03-Nov-22	154
ML1080	CONSTRUCTION ACCESS PF & FINGER PIER CONSTRUCTION COMPLETE	0	0		07-Dec-22		28-Feb-23	55
ML1100	GUIDEWAY READY FOR TRACKS	0	0		26-Feb-24		25-Apr-24	43
ML1120	TRK #3 NEW ALIGNMENT IN SERVICE	0	0	17-Mar-25		21-Mar-25		5
ML1130	TRK #5 NEW ALIGNMENT IN SERVICE (MID-TOWN DIRECT IN SERVICE)	0	0	17-Mar-25		21-Mar-25		5
ML1220	TRK #A NEW ALIGNMENT IN SERVICE	0	0		31-Mar-25		07-Nov-25	156
ML1160	TRK #6 NEW ALIGNMENT IN SERVICE (MID-TOWN DIRECT IN SERVICE)	0	0	10-Nov-25		14-Nov-25		4
ML1170	PORTAL BRIDGE NEW ALIGNMENT FULLY OPERATIONAL	0	0	17-Nov-25		17-Nov-25		0
ML1150	TRK #2 NEW ALIGNMENT IN SERVICE	0	0	17-Nov-25		17-Nov-25		0
ML1190	SUBSTANTIAL PROJECT COMPLETION	0	0		27-Jul-26		27-Jul-26	0
ML1180	SWING BRIDGE DEMOLITION COMPLETE	0	0		27-Jul-26		27-Jul-26	0
ML1210	PROJECT COMPLETION	0	0		31-Aug-26		31-Aug-26	0
ADMINISTRATIVE		1380	586	14-Jul-16 A	10-Jan-23	01-Sep-20	28-Feb-23	34
DESIGN DEVELOPMENT		200	135	14-Jun-20 A	19-Mar-21	01-Sep-20	19-Mar-21	0
PROPERTY ACQUISITIONS		714	390	01-May-19 A	28-Mar-22	19-Oct-20	23-Sep-22	126
UTILITY AGREEMENTS		1	39	16-Jul-18 A	27-Oct-20	31-Mar-21	14-Oct-21	241
MCU MODIFICATIONS		586	586	01-Sep-20	10-Jan-23	21-Apr-21	28-Feb-23	34
FULL FUNDING GRANT AGREEMENT		500	79	14-Jul-16 A	28-Dec-20	23-Nov-20	19-Mar-21	56
PROCUREMENT		408	136	09-May-19 A	22-Mar-21	16-Sep-20	22-Mar-21	0
NJT PORTAL BRIDGE GC-02		1369	1369	22-Mar-21	31-Aug-26	25-Mar-21	31-Aug-26	0
SUBMITTALS AND APPROVALS		873	873	22-Mar-21	12-Sep-24	25-Mar-21	31-Aug-26	496
FABRICATION AND DELIVERY		521	521	14-Jul-21	11-Aug-23	16-Aug-21	23-Dec-24	340
SITEWORK		807	807	22-Mar-21	10-Jun-24	25-May-21	31-Aug-26	562
GUIDEWAY		1065	1065	12-Aug-21	16-Nov-25	07-Sep-21	24-Nov-25	5
SYSTEMS		728	728	10-Jan-23	06-Dec-25	04-May-23	27-Jul-26	165
DEMOLITIONS		178	178	17-Nov-25	27-Jul-26	17-Nov-25	27-Jul-26	0
PUNCH LIST AND CLOSE OUT		203	203	17-Nov-25	31-Aug-26	07-Apr-26	31-Aug-26	0

Actual Work
Remaining Work
Milestone
Summary

PNBP - TASKS BY WBS
Update #34 Data Date 9/1/20
Summary Schedule
DRAFT

Page 1 of 1 Data Date: 01-Sep-20
Print Date: 05-Oct-20

Appendix C - PNB SCC Estimate

MAIN WORKSHEET-BUILD ALTERNATIVE (Rev.21, June 2019)

NJ TRANSIT — Today's Date: 11/24/20
Portal (North) Bridge — Yr of Base Year $: 2020
Core Capacity Rating Application — Yr of Revenue Ops: 2028

	Quantity	Base Year Dollars w/o Contingency (CC+SGR+ICR) (X000)	Base Year Dollars Allocated Contingency (CC+SGR+ICR) (X000)	Total Base Year Dollars (CC+SGR+ICR) (X000)	Core Capacity % (excluding SGR and Intercity rail)	Base Year Dollars w/o Allocated Contingency (CC Only)	Base Year Dollars Allocated Contingency (CC Only)	Total Base Year Dollars (CC Only)	Total Base Year Dollars Percentage of Construction Cost	Total Base Year Dollars Percentage of Total Project Cost	Base Year Dollars (Core Capacity Only) Percentage of Total Project Cost	YOE Dollars (CC+SGR+ICR) (X000)	YOE Dollars (Core Capacity Only)	
10 GUIDEWAY & TRACK ELEMENTS (route miles)	2.44	623,948	92,735	716,683	99.06%	618,055	91,859	709,914	66%	43%	42%	803,021	795,436	1.13115
10.01 Guideway: At-grade exclusive right-of-way				0		0	0	0				0	0	
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)				0		0	0	0				0	0	
10.03 Guideway: At-grade in mixed traffic				0		0	0	0				0	0	
10.04 Guideway: Aerial structure	1.29	561,027	84,154	645,182	100%	561,027	84,154	645,182				722,905	722,905	
10.05 Guideway: Built-up fill				0		0	0	0				0	0	
10.06 Guideway: Underground cut & cover				0		0	0	0				0	0	
10.07 Guideway: Underground tunnel				0		0	0	0				0	0	
10.08 Guideway: Retained cut or fill	1.15	45,781	6,867	52,649	100%	45,781	6,867	52,649				58,991	58,991	
10.09 Track: Direct fixation				0		0	0	0				0	0	
10.10 Track: Embedded				0		0	0	0				0	0	
10.11 Track: Ballasted		10,362	1,036	11,398	55%	5,699	570	6,269				12,771	7,024	
10.12 Track: Special (switches, turnouts)		6,777	678	7,455	78%	5,286	529	5,815				8,353	6,516	
10.13 Track: Vibration and noise dampening				0		0	0	0				0	0	
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	0	0	0	0		0	0	0	0%	0%	0%	0	0	
20.01 At-grade station, stop, shelter, mall, terminal, platform		0	0	0		0	0	0				0	0	
20.02 Aerial station, stop, shelter, mall, terminal, platform				0		0	0	0				0	0	
20.03 Underground station, stop, shelter, mall, terminal, platform				0		0	0	0				0	0	
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.				0		0	0	0				0	0	
20.05 Joint development				0		0	0	0				0	0	
20.06 Automobile parking multi-story structure				0		0	0	0				0	0	
20.07 Elevators, escalators				0		0	0	0				0	0	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	0.00	0	0	0		0	0	0	0%	0%	0%	0	0	
30.01 Administration Building: Office, sales, storage, revenue counting		0	0	0		0	0	0				0	0	
30.02 Light Maintenance Facility				0		0	0	0				0	0	
30.03 Heavy Maintenance Facility				0		0	0	0				0	0	
30.04 Storage or Maintenance of Way Building				0		0	0	0				0	0	
30.05 Yard and Yard Track				0		0	0	0				0	0	
40 SITEWORK & SPECIAL CONDITIONS	2.44	212,870	24,396	237,366	99.60%	212,125	24,299	236,425	22%	14%	14%	267,810	266,748	1.13275
40.01 Demolition, Clearing, Earthwork		16,204	2,620	18,824	95%	15,393	2,489	17,883				21,238	20,178	
40.02 Site Utilities, Utility Relocation		8,306	1,246	9,551	100%	8,306	1,246	9,551				10,776	10,776	
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		27,313	4,097	31,410	100%	27,313	4,097	31,410				35,439	35,439	
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		6,364	955	7,319	100%	6,364	955	7,319				8,258	8,258	
40.05 Site structures including retaining walls, sound walls		0	0	0	0%	0	0	0				0	0	
40.06 Pedestrian / bike access and accommodation, landscaping		0	0	0	0%	0	0	0				0	0	
40.07 Automobile, bus, van accessways including roads, parking lots		31,570	3,157	34,727	100%	31,570	3,157	34,727				39,181	39,181	
40.08 Temporary Facilities and other indirect costs during construction		123,213	12,321	135,534	100%	123,213	12,321	135,534				152,917	162,917	
50 SYSTEMS	2.44	130,892	13,089	143,981	77.52%	101,994	10,199	112,193	13%	8%	7%	170,068	132,613	1.51575
50.01 Train control and signals		26,543	2,654	29,197	55%	14,599	1,460	16,059				34,485	16,967	
50.02 Traffic signals and crossing protection		0	0	0	0%	0	0	0				0	0	
50.03 Traction power supply: substations		30,164	3,016	33,180	85%	25,639	2,564	28,203				39,189	33,311	
50.04 Traction power distribution: catenary and third rail		48,261	4,826	53,087	85%	41,022	4,102	45,124				62,702	53,296	
50.05 Communications		20,720	2,072	22,792	85%	17,612	1,761	19,373				26,920	22,882	
50.06 Fare collection system and equipment		0	0	0	0%	0	0	0				0	0	
50.07 Central Control		5,204	520	5,725	60%	3,123	312	3,435				6,762	4,057	
Construction Subtotal (10 - 50)	2.44	967,810	130,221	1,098,030		932,174	126,358	1,058,532	100%	66%	63%	1,240,888	1,194,897	1.17227
60 ROW, LAND, EXISTING IMPROVEMENTS	2.44	20,292	3,000	23,292	100.00%	20,292	3,000	23,292		1%	1%	24,311	24,311	1.04372
60.01 Purchase or lease of real estate		17,571	2,500	20,071	100%	17,571	2,500	20,071				20,949	20,949	
60.02 Relocation of existing households and businesses		2,721	500	3,221	100%	2,721	500	3,221				3,362	3,362	
70 VEHICLES (number)	26	58,562	2,928	61,490	100%	58,562	2,928	61,490		11%	4%	71,329	71,329	1.16001
70.01 Light Rail				0		0	0	0				0	0	
70.02 Heavy Rail				0		0	0	0				0	0	
70.03 Commuter Rail	25	58,562	2,928	61,490	100%	58,562	2,928	61,490				71,329	71,329	
70.04 Bus				0		0	0	0				0	0	
70.05 Other				0		0	0	0				0	0	
70.06 Non-revenue vehicles				0		0	0	0				0	0	
70.07 Spare parts				0		0	0	0				0	0	
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	2.44	166,156	15,889	182,045	51.15%	84,993	8,128	93,121	17%	11%	6%	208,781	106,774	2.220561
80.01 Project Development		7,263	0	7,263	100%	7,263	0	7,263				8,260	8,260	
80.02 Engineering		24,690	2,469	27,158	100%	24,690	2,469	27,158				30,849	30,849	
80.03 Project Management for Design and Construction		12,824	1,282	14,106	100%	12,824	1,282	14,106				16,023	16,023	
80.04 Construction Administration & Management		72,879	7,288	80,167	23%	16,762	1,676	18,438				91,060	20,944	
80.05 Professional Liability and other Non-Construction Insurance		8,262	826	9,088	93%	7,684	768	8,452				10,323	8,801	
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		1,050	105	1,155	100%	1,050	105	1,155				1,312	1,312	
80.07 Surveys, Testing, Investigation, Inspection		9,035	903	9,938	100%	9,035	903	9,938				11,289	11,289	
80.08 Start up		30,154	3,015	33,169	20%	6,009	601	6,610				37,675	7,508	
Subtotal (10 - 80)	2.44	1,212,819	152,038	1,364,857		1,096,022	140,414	1,236,436		88%	74%	1,543,309	1,396,111	
90 UNALLOCATED CONTINGENCY				153,131	90%			137,818				173,360	168,024	1.25789
Subtotal (10 - 90)	2.44			1,517,989				1,374,254				1,716,669	1,562,135	
100 FINANCE CHARGES (CC Only)				152,670				152,670				180,033	180,033	1.17924
Total Project Cost (10 - 100)	2.44			1,670,659				1,526,924				1,896,702	1,732,168	1.24217
Allocated Contingency as % of Base Yr Dollars w/o Contingency												13%	13%	
Unallocated Contingency as % of Base Yr Dollars w/o Contingency												13%	13%	
Total Contingency as % of Base Yr Dollars w/o Contingency												25%	25%	
Unallocated Contingency as % of Subtotal (10 - 80)												11%	11%	

Appendix D - Documents Reviewed

	Required Item / Document	Document File Name(s)
1	Core Capacity Templates	2.1 Portal Bridge Core Capacity Submission_06-29-18.pdf
2	Financial Plan	3.1 PNB Financial Plan_6-29-18.pdf
3	SCC Cost Estimate	6 SCC Workbook Portal North Bridge 06-29-2018.xlsx 6 SCC Workbook Portal North Bridge - 11-24-20 (002).xlsx
4	Project Management Plan	04 PNB PMP – rev. 3 Sep 2020.pdf
5	Quality Management Plan	5C PNB QMP Rev 1 Sep 2020.pdf (NJT) 05A PNB QMP rev.2.1 Nov 2019.pdf (Portal Partners) 05B – JV CM_3-1-20 QAQC (CM)
	Force Management Plan	PNB Force Account Plan – draft, July 15, 2020 PNB Force Account Estimate – draft, July 15, 2020 prepared by Hill International, Inc.
6	Safety and Security Management Plan	06 PNB SSMP Rev 1 Nov 2017
7	Real Estate Acquisition Management Plan	08 PNB-RAMP – 03.20.2020.pdf
8	Rail Fleet Management Plan	K-1. NJT Rail Fleet Plan 2014-2020.pdf
9	Integrated Project Schedule	Portal Bridge IPS.pdf

	Required Item / Document	Document File Name(s)
10	Documentation of Project Definition & Scope	Project Plans/Drawings: 100FE-Part-1-complete.pdf 100FE_PART 2-complete.pdf CD FINAL - 100 FE PART 3 - Volume I.pdf CD FINAL - 100 FE PART 3 - Volume II.pdf 100FE_PART 4-complete.pdf 100fe_Tech_Prov_Final.pdf Project Design Criteria - Rev 4 071811.pdf Compendium Report - Preliminary 100% Design - 07.31.2009.pdf FEIS - October 2008 (entire document not included - if necessary, provided upon request): FEIS - Summary.pdf Federal Railroad Administration (FRA) Record of Decision (ROD) updated in 2011 & 2016: Portal NEPA ROD 23 Dec 2008.pdf FRA NEPA ROD Re-Evaluation 30 Mar 2011.pdf Portal North ROD 06June2013.pdf Executed NEPA Re-Examination Worksheet - 11 Aug 2016 FINAL with Attachments A - G.pdf FTA Record of Decision (ROD) - July 2017: AttachmentA.PDF AttachmentB.PDF AttachmentC.PDF AttachmentD.PDF FTA ROD 07-25-2017.pdf Memorandum of Agreement - Original - 10.01.2008.pdf MOA.PDF
11	Contracting Plans & Documents*	100FE-Part-1-complete.pdf 100FE_PART 2-complete.pdf CD FINAL - 100 FE PART 3 - Volume I.pdf CD FINAL - 100 FE PART 3 - Volume II.pdf 100FE_PART 4-complete.pdf 100fe_Tech_Prov_Final.pdf *Note the above documents can be found in the above folder "10- Documentation of Project Definition & Scope"
12	Project Delivery Method	Appendix C - AECOM-STV Contract Packaging Analysis.pdf Package Option 3.pdf Procurement Delivery Plan.pdf TASK 11 - Contract Packaging & Procurement Strategies - 120809 - FINAL.pdf Procurement Manual - 2012.pdf NJ State Prevailing Wage Rates.pdf
13	Third-Party Agreements - Utilities	Refer to Appendix A
	Third Party Agreements - Amtrak	Refer to Appendix A

	Required Item / Document	Document File Name(s)
14	Geotechnical Report	<u>Geotechnical Data Report - March 30, 2012:</u> PBCE GDR Binder1a RC - Single Sided.pdf PBCE GDR Binder1b RC - Double Sided.pdf PBCE GDR Binder2 RC - Double Sided.pdf PBCE GDR Binder3 RC - Double Sided.pdf PBCE GDR Binder4 RC.pdf <u>Geotechnical Data Report Addendum No. 1 - December 14, 2012:</u> 01 Cover (single-sided color).pdf 02 Report Text (single-sided color) - Rev.1.pdf 03 Figures Fly Sheet (double-sided color).pdf 04 Figures (single-sided color).pdf 05 Tables Fly Sheet (double-sided color).pdf 06 Tables (single-sided b&w).pdf Appendix A (double-sided b&w).pdf Appendix B (double-sided color scale to fit).pdf Appendix C (double-sided color).pdf Appendix D (double-sided color).pdf Appendix E (double-sided color).pdf Appendix F 01 Fly Sheet (double-sided color).pdf Appendix F 02 (single-sided color).pdf Appendix G-1 (double-sided color).pdf Appendix G-2 (double-sided color).pdf Appendix G-3 (double-sided color).pdf Appendix H (double-sided color).pdf
		<u>Foundation Design Report - January 31, 2013:</u> Final Report Text (double-sided color) Rev.1.1.pdf <u>Drilled Shaft & Driven Pile Load Test Program Report - January 14, 2013:</u> Portal Drilled Shaft & Driven Pile Test Program Summary Report.pdf
15	Value Engineering Report	Portal Bridge Full VE Study 02-05-10.pdf Final Value Engineering Responses & Determinations 14 Apr 2010.pdf
16	Preliminary Safety Hazard Analysis & Preliminary TVA & Safety and Security Design Criteria	PBCE TVA Risk Assessment - Executive Summary, 15 Apr.pdf 2009.07.28_SSEMPPP_FINAL30%.pdf 2009.07.24_MASTER_SSPP KLP.pdf
17	Constructability Review Report	TASK 10 - Constructability Report - 120809 - FINAL.pdf
18	Draft Before & After Study Data Collection Plan	Portal North Bridge - Before and After Study - DRAFT.pdf

Financial Capacity Assessment
of the
New Jersey Transit Corporation
for the
Portal North Bridge Core Capacity Project

prepared for the Federal Transit Administration

by Porter & Associates, Inc.

contract no. 69319520D000001

November 2020

Based on project sponsor financial plan

updated October 2020

TPE-201202-001

Table of Contents

Glossary of Abbreviations, Acronyms and Terms

Amtrak	National Railroad Passenger Corporation
CAFR	Comprehensive Annual Financial Report
CAGR	Compound Annual Growth Rate
CIG	Capital Investment Grant
CIP	Capital Improvement Program
CPI-U	Consumer Price Index, All Urban Consumers
DOT	U.S. Department of Transportation
DSCR	Debt Service Coverage Ratio
FAST Act	Fixing America's Surface Transportation Act (2015)
FC	Financial consultant (to FTA, for this FCA)
FCA	Financial Capacity Assessment
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FY	Fiscal Year (NJT FY ends June 30)
LOC	Line of Credit
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MNR	MTA Metro-North Railroad
MPO	Metropolitan Planning Organization
NEC	Northeast Corridor
NEPA	National Environmental Policy Act
NJDOT	New Jersey Department of Transportation
NJEDA	New Jersey Economic Development Authority
NJT	New Jersey Transit Corporation
NJTA	New Jersey Turnpike Authority
NJTPA	North Jersey Transportation Planning Authority (MPO)
NJTTF	New Jersey Transportation Trust Fund
NJTTFA	New Jersey Transportation Trust Fund Authority
NTD	National Transit Database
PMOC	Project Management Oversight Contractor
PTC	Positive Train Control
S&P	Standard & Poor's
SGR	State of Good Repair
STIP	Statewide Transportation Improvement Program
STBG	Surface Transportation Block Grant Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program (of the MPO)

1. Executive Summary

This document presents a financial capacity assessment (FCA) of the New Jersey Transit Corporation (NJT), under consideration for a Full Funding Grant Agreement (FFGA) for the Portal North Bridge Core Capacity Project ("the Project").

The Project will replace a 110-year old, low-level swing bridge over the Hackensack River with a high-level fixed span bridge, enabling capacity, speed, and reliability improvements for public transportation and intercity rail services in the Northeast Corridor (NEC). The current bridge is owned and operated by the National Railroad Passenger Corporation (Amtrak). The bridge is used by both Amtrak and NJT. A description of the Project is provided in section 2.1.

NJT is a component unit of the State of New Jersey created by the New Jersey Public Transportation Act of 1979. NJT directly operates commuter rail, motor bus, and light rail services. NJT also contracts for the operation of motor bus, light rail, paratransit, and vanpool services. NJT has a seven-member Board of Directors appointed by the governor with the consent of the state Senate. Please see section 2.2 for additional details.

NJT and Amtrak are sharing the cost of the replacement bridge, with construction cost shared in proportion to ridership across the bridge (90 percent NJT, 10 percent Amtrak) during the peak hour in the peak direction. The overall project cost is $1.888 billion in (YOE) dollars. The public transportation share of the overall cost, referred to as the Core Capacity Project (or "the Project") is $1.724 million. The cost of the intercity rail portion of the overall project, funded entirely by Amtrak, is $164 million. The substantial completion date for the Project is scheduled to be June 2026. The cost estimate and schedule are described in section 3.

NJT is requesting $767 million in Section 5309 Capital Investment Grant (CIG) funds for the Project. The remaining funds ($957 million) include Federal Congestion Mitigation and Air Quality Improvement (CMAQ) program funds ($57 million), Amtrak funds ($93 million), State of New Jersey funds appropriated from the New Jersey Transportation Trust Fund ($40 million), toll revenues from the New Jersey Turnpike Authority ($176 million), and proceeds from bonds to be issued by the New Jersey Economic Development Authority ($591 million). The sources and uses of funds for the Project, and the Project cash flow, are described in section 3.

This report analyzes the reasonableness of the Project financial plan, and a system-wide long-term financial plan for all transit services to be operated by NJT through 2039. The NJT financial plan is dated September 2020. NJT provided various updates in October 2020.

This assessment finds:

- NJT has taken all necessary steps to ensure that funds are committed or budgeted for the Project. Please refer to section 3 for details.
- In the past five years, NJT transit service provided has been stable, ridership has declined modestly, and the cost of existing services, including capital replacement, has been funded from current revenues. The revenue fleet age is in line with the US average for each of the fleets. Liquidity is adequate, and use of debt has been decreasing. In short, NJT is in good financial condition.
- The operating financial plan indicates that NJT has the financial capability to sustain current operations, but this outcome rests on very optimistic assumptions regarding passenger revenue growth. The operational impact of the Project is not a significant factor in the operating financial plan. The capital financial plan indicates that NJT's funding assumptions for Federal, State, and other local contributions are reasonable, which attests to NJT's financial capability to meet its SGR needs. Please refer to section 5 for supporting details.
- The FTA financial consultant (FC) conducted two stress tests, including a 10 percent increase in overall Project construction costs, and inflation-based growth in passenger revenues for the period 2024-2039. NJT can accommodate a 10 percent increase in overall Project construction costs, using Project-specific funds that are currently committed or budgeted. The passenger revenue stress test results in a decrease of the passenger revenue forecast by $10.3 billion, producing a deficit of $6.1 billion, representing about 9 percent of forecasted operating cost. Normally, the combined effect of stress tests in included in an FCA, but that is not meaningful in this case, as there is no financial cross-over between the PNB Project financial plan and the NJT systemwide operating financial plan.

Despite these concerns with the financial plan and the assumptions used in it, the Local Financial Commitment rating is Medium-High.

2. Scope of the FCA

This section of the report provides an overview of the Project, describes the project sponsor and related entities involved in implementing the Project, and summarizes the limitations of data used in this report.

2.1 PROJECT DESCRIPTION

The existing Portal Bridge is a two-track, railroad swing-type drawbridge that crosses the Hackensack River in Hudson County, New Jersey, between Kearny and Secaucus townships. The bridge is owned and operated by the National Railroad Passenger Corporation (Amtrak), and is used by both Amtrak and New Jersey Transit (NJT). It is a vital element of the Northeast Corridor (NEC), the most heavily used intercity passenger rail line in the U.S. NJT accounts for approximately 90 percent of daily passenger trips across the Portal Bridge.

The Portal Bridge was built in 1910. The bridge's low clearance requires the swing-span to pivot open for crossing maritime traffic. Opening the span closes the bridge to rail traffic, interrupting operations at a critical juncture on the NEC. The bridge's equipment also experiences frequent mechanical failures, resulting in delays that cascade up and down the NEC. The risk of continued and increasing unplanned outages due to malfunctioning of the obsolete bridge cannot be mitigated through maintenance.

The Portal North Bridge project will replace the existing bridge with a new two-track fixed high-level structure, on a new rail alignment. The alignment is approximately 2.44 miles long. The new bridge will provide sufficient clearance over the Hackensack River to accommodate current and forecasted maritime traffic. The new bridge design will improve reliability, allowing NJT to operate longer and higher capacity trains. Additionally, trains will be able to cross the bridge at 90 mph, up from 60 mph today. The project scope includes the purchase of 25 multilevel cars that will provide additional peak-hour commuter rail passenger capacity.

The Portal North Bridge project is part of the Gateway Program, the comprehensive rail improvement program between Newark, NJ, and Penn Station in New York (PSNY). Another major element of the Gateway Program, the Hudson River Tunnel project, is a separate project in the FTA Capital Investment Grants (CIG) program. Other elements of the overall Gateway Program in future phases include the replacement of the Sawtooth Bridges in New Jersey, and the expansion of PSNY, Newark Penn Station, and Secaucus Junction.

2.2 PROJECT SPONSOR

NJT is the project sponsor, and is responsible for planning and design, as well as procurement, construction and delivery of the Project, in cooperation with Amtrak. NJT will operate public transportation services over the new bridge.

NJT is a component unit of the State of New Jersey created by the New Jersey Public Transportation Act of 1979. NJT directly operates commuter rail, motor bus, and light rail services. NJT also contracts for the operation of motor bus, light rail, paratransit, and vanpool services. NJT has a seven-member Board of Directors appointed by the governor with the consent of the state Senate. Committee members are appointed by the governor and approved by the state Senate. NJT employs an executive director who manages the day-to-day operations. NJT receives operating assistance and capital funds from the state of New Jersey by annual legislative appropriation. Operating assistance is provided by specific appropriation to NJT, from the State's general fund and from the Casino Revenue fund, among other sources. Capital funds are allocated to NJT by the Commissioner of Transportation, subject to the legislature's appropriation of funds to the New Jersey Transportation Trust Fund Authority (NJTTFA). NJTTFA manages the New Jersey Transportation Trust Fund (NJTTF), which receives revenues from a variety of state taxes and fees, including those dedicated to transportation uses.

Although NJT is the Project sponsor, State and local funding for the Project will be provided by other entities, through various agreements, that create a multifaceted institutional context for construction of the Project.

The New Jersey Economic Development Authority (NJEDA) will issue bonds for the Project. The bonds will be secured by a lease-leaseback arrangement involving agreements between and among NJEDA, NJT, and the New Jersey Commissioner of Transportation. NJEDA has issued similar bonds for other NJT projects in the past, with the most recent bond issue occurring in January 2020.

The New Jersey Turnpike Authority (NJTA) will contribute to the capital cost of the Project. The NJTA is a body corporate and politic of the State of New Jersey, and exists as a public corporation within the New Jersey Department of Transportation (NJDOT). NJTA owns and operates the New Jersey Turnpike (122-mile mainline and two extensions) and the Garden State Parkway (173-mile limited access toll road from Cape May, New Jersey to Spring Valley, New York). The powers delegated by the State to NJTA are described in New Jersey Statutes, Title 27, chapter 23. NJTA’s powers are exercised by eight members of the Authority, one of which is the Commissioner of Transportation, and seven of which are appointed by the Governor (five, with the advice and consent of the Senate, one recommended by the President of the Senate, and one recommended by the Speaker of the Assembly). Since the Commissioner is also appointed by the Governor, the Authority is effectively controlled by the Governor. The

members function as a Board. Five members form a quorum; five affirmative votes are required to approve an action. NJTA has committed funds to the Project each year that the NJEDA bonds are outstanding. Although NJTA is required to submit various reports to the Governor, the Chairs of the Appropriations Committees of the Senate and General Assembly, and the Director of the Division of Budget and Accounting of the Department of the Treasury, the statutes governing NJTA specifically state that no authorization or approval by the Legislature shall be required for the authority to undertake the projects proposed in its plan or to undertake work on existing transportation projects.

The Project is included in the approved 2020-2029 capital program approved by Commissioner of Transportation in April 2020. The Project is also included in the current transportation improvement program (TIP) of the North Jersey Transportation Planning Authority (NJTPA).

2.3 LIMITATIONS OF DATA AND THE REPORT

The assessment presented herein relies on documents supplied by NJT describing historical revenues, expenditures, assets, and liabilities in a financial plan prepared in September 2020. The financial plan included actual financial results through June 2019, the most recent fiscal year for which audited financial data are available. The financial plan reflects the current Project cost estimate and is based on the NJT 2020 approved budget. A list of documents pertaining to the findings of this report is presented in Appendix A.

The financial consultant (FC) accepted the documents supplied by NJT at face value; the FC did not audit or otherwise examine the veracity of the data, but did explore the methods and data sources used to develop estimates in the financial plan, where circumstances suggested the need for explanation.

The FC acknowledges that, by their nature, financial forecasts assume the occurrence of future events that are unlikely to occur exactly as planned. Variances between assumed and actual outcomes may occur and could be material.

The financial plan submittal from NJT generally conforms to FTA's *Guidelines for Transit Financial Plans* in terms of required content and the forecast.

The FCA included a review of the reasonableness of the forecast assumptions used in NJT's financial plan, focusing on the contrast between these assumptions and historical trends, in the context of current economic conditions. The assessment carefully examined but did not attempt to fully proof the forecast methodology.

3. Project Financial Plan

This section of the report describes the Project budget and annual cash flow, and presents an assessment of NJT's capacity to accommodate unexpected higher project costs or funding shortfalls.

3.1 PROJECT COST ESTIMATE AND FUNDING SOURCES

The CIG Project cost estimate is $1.724 billion in YOE dollars, including $180 million in financing costs. A full breakdown of the Project cost is provided in Standard Cost Category (SCC) worksheets provided to FTA by NJT. A higher-level breakdown of the sources and uses of funds is provided in Appendix B.

The total cost of the Portal North Bridge Project is $1.888 billion, including financing costs and the intercity rail portion of the overall project. While joint intercity rail and public transportation projects are eligible for CIG funds, the law specifies that CIG funding may be used only on the capital cost attributable to public transportation based on projected use of the corridor. Thus, of the total project cost, $1.724 billion (91.3 percent) is attributable to public transportation and proposed to be funded with CIG funds. This percentage is higher than public transportation's share of existing average weekday ridership in the peak hour in the peak direction in the corridor (i.e., 90 percent) because the public transportation component of the Project includes elements that are entirely public transportation costs (e.g., commuter rail cars). The remaining $164 million of the overall project cost is attributable entirely to intercity rail, and will be funded by Amtrak through various Federal sources. The public transportation portion of the overall project is referred to in this report as the CIG Project, to distinguish between the public transportation cost and the total project cost including the intercity rail portion.

The CIG funding request of $767 million is the single largest funding source, covering 44.5 percent of the CIG Project cost, and 40.6 percent of the overall project cost. The CIG funds are assumed to be available to NJT as follows: $248 million in 2021; $125 million in 2022; $100 million per year, 2023-2025; and $94 million in 2026.

The remaining Project funds ($957 million, 55.5 percent of CIG Project cost) are sourced as follows:

- *CMAQ funds, $57 million.* The NJTPA TIP for fiscal years 2020-2023 includes $370 million in CMAQ funds for NJT railcar procurement. Of this total, $57 million is being used to acquire 25 railcars for the CIG Project. The

CMAQ funds are an existing source that is considered committed because the total amount of funding is already included in an approved TIP/STIP.

- *Amtrak Contribution, $94 million.* Amtrak and NJT executed a "Funding and Coordination Agreement" on December 27, 2018, whereby NJT agreed to pay Amtrak $182 million to settle outstanding disputes. NJT paid this amount to Amtrak on December 31, 2018. Amtrak is maintaining these cash funds in an interest-bearing escrow account, and the Funding and Coordination Agreement states that NJT may use these funds to support the Project. On July 23, 2020, the Amtrak Board adopted a resolution committing funds to the Project, including $65 million from the escrow account, leaving a balance of $118 million for potential cost overruns. The financial plan states that $94 million from this escrow account will be applied to the CIG Project, which includes the original $65 million plus another $29 million from the cost overrun reserve, leaving a balance of $89 million that may be applied to other Project uses. The $94 million in Amtrak funding for the current Project cost estimate is considered committed since the agreement has been executed, and the funds are in Amtrak's custodial care.
- *NJTTF, matching funds for CMAQ grant, $14 million*. NJTTF matching funds for the CMAQ grant noted above are included in the 2020-2029 Statewide Transportation Improvement Program (STIP). NJTTF receives a variety of revenues, including motor fuel taxes and commercial vehicle taxes and fees. NJTTF funds are subject to annual appropriation by the state legislature. This is an existing source that is considered budgeted since the funds are fully programmed but must await annual appropriation.
- *NJTTF, 2018 and 2019 appropriations for the Project, $26 million.* The approved 2018 and 2019 NJT-NJDOT Capital Programs each included an annual appropriation of NJTTF funds for the Project, specifically $20.93 million in 2018, and $14.0 million in 2019. The financial plan states that of this total $34.93 million, $26.12 million is being applied to the Project, leaving $8.8 million for other Project-related uses. These funds are considered committed because they are part of an adopted budget, they have been appropriated by the legislature, and no further approvals are required to apply the funds to the Project.
- *NJTA revenues, $176 million.* NJTA entered into a funding agreement with the New Jersey State Treasurer on October 8, 2019 to provide $25 million annually to the State, to be applied to debt service on the NJEDA bonds issued for the Project. The annual $25 million from NJTA is included in the Project funding plan in the 2020-2029 STIP. Of the total $225 million available from NJTA through 2028 (i.e., nine years at $25 million per year), $176 million will be applied to interest on the NJEDA bonds, which is included in the Project's financing costs. This leaves a balance of $49 million to apply to principal payments on the bonds. The availability of NJTA funds is contingent upon the NJEDA bond issuance, and NJT's execution of a FFGA with FTA

for the Project. Due to these contingencies, the NJTA contribution is considered budgeted, rather than committed.

- *NJEDA bonds, repaid by NJTTFA and NJTA revenues, $591 million.* NJEDA, NJT, and the NJDOT Commissioner, with the consent of the Governor of New Jersey, executed a funding agreement in June 2018 for up to $600 million in NJEDA-issued bonds for the Portal North Bridge. The financial plan submitted assumes issuance of $591 million in bonds. These bonds will be secured by a pledge of rental payments to NJEDA from NJT, structured as a lease-leaseback financing (i.e., NJT would lease its property interest in the bridge to NJEDA, then NJT would sublease the bridge from NJEDA, and would make rental payments equal to annual debt service on the bonds). On August 1, 2020, NJT, with the approval of the NJDOT Commissioner, entered into a funding agreement with NJEDA, in which NJT pledged its State appropriations to secure the payment of NJT's rental payments to NJEDA. NJT and NJEDA have entered into similar financing arrangements, of similar magnitude, to fund other transit projects, most recently in January 2020. Per the executed funding agreement, issuance of the NJEDA bonds is subject to lease and sublease agreements specifying the timing and amount of rental payments necessary to fund NJEDA bond debt service, that cannot be executed until just prior to issuance of the bonds, when terms of the bond sale are finalized. Accordingly, the NJTA bonds are considered budgeted.

Since bond financing is included in the sources of funds for the Project, and because debt service will be paid by sources external to NJT, it is important to demonstrate that committed and budgeted funds are sufficient to pay debt service. Through 2028, assumed by NJT to be the final year of Project construction, debt service on the NJEDA bonds totals $254 million, comprised of interest payments totaling $176 million, and principal payments totaling $78 million. The interest payments are part of the financing costs included in the Project cost estimate, and would be paid by NJTA revenues, as described above. Principal payments on the bonds, which are excluded from the Project cost estimate (since this cost is already represented in the NJEDA bonds) would be paid by NJTA funds not applied to interest payments ($49 million), and the balance ($29 million) would be paid by a portion of NJTTF funds budgeted for the Project in the 2020-2029 STIP. The approved 2020-2029 STIP includes $182.2 million in NJTTF revenues through 2028. After deducting the $29 million being applied to principal payments on the NJEDA bonds, there is a balance of $153.2 million available for other Project-related purposes. The NJTTF funds are considered budgeted, until appropriated. The foregoing demonstrates that the NJTA and NJTTF funds for the Project that have been budgeted or committed are sufficient to pay debt service on the NJEDA bonds through 2028, and would leave a funding balance of $153.2 million that could be applied to other Project-related purposes.

In summary, all non-CIG capital sources of funds for the Project are considered committed or budgeted.

3.2 PROJECT CASH FLOW

The cash flow for the Project is presented in Appendix C. The cash flow includes the annual sources of funds referenced in Appendix B and described above. The uses of funds present construction cost as a single line item, and include a breakdown of financing costs. The cash flow includes all sources and uses of funds relevant to the CIG Project, through the end of construction, which is anticipated to occur in July 2027 (fiscal year 2028). Substantial completion is anticipated to occur in June 2026.

The cash flow as presented in Appendix C presents a positive carryforward balance (i.e., cumulative sources minus cumulative uses) for each year until 2028, when the final funds are drawn down. This carryforward balance, which reaches a high of $881 million, occurs primarily because the issuance of NJEDA bonds and receipt of the first CIG apportionment (in 2021) occur in advance of heavy construction activity.

NJT has included the use of GAN financing (proceeds of $12 million) that would occur in 2024. The final maturity of the GAN is projected to occur in 2028.

The financing costs included in the Project cost estimate ($180 million) were estimated by NJT based on the NJEDA bonds ($591 million) and the GAN ($12 million). Issuance costs for the NJEDA bonds are estimated to be $3 million. This is similar to the issuance costs of a $500 million NJEDA bond issue June 2020. Interest costs on the NJEDA bonds through 2028 ($176 million), assume a 30-year bond maturity, level annual debt service, and a 4.5 percent interest rate. The interest rate assumption is similar to the June 2020 NJEDA bonds, for which the interest rates varied between 4 percent and 5 percent. The revenue pledge on the June 2020 NJEDA bonds is similar to that being used for the bonds to be issued for the Project (i.e., rental payments, backed by an appropriations pledge). The June 2020 bonds were rated BBB+ (Standard & Poors), Baa1 (Moody's), and A- (Fitch). Although the interest rate is higher than the current market rate for an A-rated bond (2.15 percent), the fact that it is consistent with a recent, similarly-structured issue indicates that the interest rate assumption is reasonable. NJT assumes that the GAN interest rate would be 4.1 percent. This is a very conservative assumption given that the current yield on 10-year, A-rated notes is 1.1 percent. However, because the GAN would not be issued until 2024, a conservative interest rate assumption is prudent. In all, the financing costs are reasonable.

3.3 CAPACITY TO ACCOMMODATE HIGHER PROJECT COSTS OR FUNDING SHORTFALLS

NJT can accommodate a 10 percent increase in total Project cost from funding sources that currently committed or budgeted, as demonstrated in a sensitivity analysis performed by NJT in October 2020. The sensitivity analysis considers total Project cost, rather than just the CIG Project cost, because NJT and Amtrak have agreed to share cost increases on a 50-50 basis. This is stipulated in a draft Project Development Agreement (September 30, 2020), to which the Boards of both NJT and Amtrak have agreed.

The sensitivity test can be summarized as follows:

- A 10 percent increase in total project construction cost ($171 million on a base of $1.708 billion) would be shared 50-50 by Amtrak and NJT, or $85.5 million each.
- The Amtrak share ($85.5 million) would draw from the available balance ($89 million) in the Amtrak Escrow Account, leaving a balance of $3.5 million for future uses.
- The NJT share totals $88.5 million, consisting of the 50 percent share of additional construction cost ($85.5 million), plus an additional $3 million in financing cost that is applicable only to the CIG Project.
- The NJT share ($88.5 million) would be funded as follows:
  - $9 million in NJEDA bonds (i.e., original $600 million authorized, less $591 million already applied to CIG Project funding).
  - $77 million in NJTTF funding from an available balance of $153 million (i.e., 2020-2028 STIP budgeted funds totaling $182.2 million, less $29 million applied to principal payments on original NJEDA bond issue), leaving a balance of $76 million for future uses.

In addition to the Amtrak Escrow Account balance ($3.5 million) and NJTTF balance ($76 million) noted above, an additional $8.8 million of the 2018-2019 NJTTF appropriations for the Project have not been applied. Thus, a total of approximately $88 million is available when and if needed. This equates to another 5 percent of total Project construction cost.

In summary, all the non-CIG capital funds for the Project have been committed or budgeted. NJT has demonstrated the financial capacity to accommodate at least a 10 percent change in Project cost or funding shortfalls.

4. System-Wide Financial Condition

The analysis of system-wide financial condition presented in this section of the report is based on historical trends and current experience concerning NJT's financial ability to operate and maintain its transit system at present levels of service as required by CIG law for receipt of an FFGA. The analysis focuses on the period 2015 to 2019, and relies on information presented in the financial plan, as well as NJT submittals to the National Transit Database (NTD). It should be noted that audited financial statements through 2019 were used to support the trend analysis. Additionally, NTD data for 2019 was not available at the time this report was prepared.

The analysis found that NJT operated and maintained a consistent level of service over the five-year period, and paid current costs from existing revenues, as evidenced by the following findings from the trend data:

- NJT experienced stable service levels, declining ridership, operating revenue growth that lagged operating cost growth, resulting in operating subsidy growth of about 3.5 percent annually. This growth was funded by an increasing amount of State funds applied to operations.
- NJT's bus fleet age is in line with the industry average. Average annual capital expenditures for SGR steadily increased.
- NJT has adequate liquidity, and over the past five years NJT has substantially reduced its outstanding indebtedness.

Each of these findings is described in detail in the remainder of this section.

4.1 TRANSIT OPERATIONS

The analysis of NJT's operating financial condition was based on trends in the level of service operated, ridership, operating revenue, operating cost, and operating subsidy. This analysis was based primarily on annual financial results presented in the NJT financial plan submitted to FTA, supplemented by data submitted by NJT to NTD. The operating trend data are presented in Appendix D.

During the five-year period ending with fiscal year 2019, NJT experienced stable service levels, ridership decline, operating revenue growth (due to fare increases), and operating cost growth that exceeded operating revenue growth, resulting in operating subsidy growth of about 3.5 percent annually. Each of these trends is described below.

4.1.1 Level of Service Provided

NJT operates bus, rail (commuter rail, light rail, and hybrid rail), and demand response services. The level of service provided by each of these modes is measured by vehicle revenue miles (VRM). Over the past five years (2015-2019), the trend in VRM varied slightly by mode:

- Bus VRM increased at a 0.3 percent CAGR, growing from 79.6 million VRM in 2015 to 80.5 million VRM in 2019. Growth in VRM was steady, but for a 1.0 percent dip in 2017. Bus VRM accounted for 50 percent of system-wide VRM in the 2015-2019 period.
- Rail VRM decreased at a -1.7 percent CAGR, declining from 66.8 million VRM in 2015 to 62.4 million VRM in 2019. Part of this decline is attributed to NJT's installation of Positive Train Control (PTC) on commuter trains, which required track closures. Rail VRM accounted for 41 percent of system-wide VRM in the 2015-2019 period.
- Demand response VRM increased at a 4.8 percent CAGR, growing steadily from 13.8 million VRM in 2015 to 16.7 million VRM in 2019. Demand response VRM accounted for 9 percent of system-wide VRM in the 2015-2019 period.

On a system-wide basis (i.e., the sum of the above modes), NJT transit service was virtually unchanged between 2015 and 2019. VRM fell slightly from 160.2 million in 2015 to 159.6 million in 2019, yielding a -0.1 percent CAGR. NJT service levels may be considered stable from an overall perspective.

4.1.2 Ridership and Operating Revenue

About 48 percent of NJT's operating costs are covered by operating revenues, as indicated by the operating ratio (i.e., operating revenues divided by operating cost).

Operating revenues grew from $1.035 billion in 2015 to $1.114 billion in 2019, yielding a 1.9 percent CAGR. The remainder of this section presents a breakdown of this overall trend, addressing the trends in ridership, fare revenue, and other operating revenues.

Ridership

System-wide ridership declined from 275.7 million in 2015 to 266.6 million in 2019, yielding a -0.8 percent CAGR. However, the ridership trend varied by type of service:

- Bus ridership declined from 162.5 million in 2015 to 151.1 million, yielding a -1.8 percent CAGR. Ridership per VRM fell at a slightly higher rate (-2.1 percent CAGR) due to expanded bus services in this period.

- Rail ridership increased from 111.9 million in 2015 to 113.9 million in 2019, yielding a 0.4 percent CAGR. Ridership per VRM grew at a slightly higher rate (2.2 percent CAGR) due to a decrease in rail services in this period.
- Demand response ridership increased from 1.40 million in 2015 to 1.71 million in 2019, yielding a 5.1 percent CAGR. Ridership per VRM grew at a lower rate (0.3 percent CAGR) due to the extent of demand response service expansion in this period.

In summary, the loss in system-wide ridership between 2015 and 2016 was due exclusively to losses in bus system ridership.

Fare Revenue

Fare revenue grew from $929 million in 2015 to $974 million in 2019, yielding a 1.2 percent CAGR. The data provided by NJT does not provide a breakdown by mode.

The average fare per passenger grew from $3.37 in 2015 to $3.65 in 2019, yielding a 2.0 percent CAGR, which is slightly higher than inflation in this period as measured by the CPI-U (1.6 percent CAGR). The increase in the average fare is attributable primarily to a 9 percent fare increase implemented in October 2015 (fiscal year 2016), the effect of which can be seen in the 2016 and 2017 average fares ($3.58 and $3.68, respectively). Very small changes in the average fare occurred between 2017 and 2019, likely reflecting changes in the distribution of ridership among NJT's services.

The combination of the loss in ridership (-0.8 percent CAGR) between 2015 and 2019, and the increase in the average fare (2.0 percent CAGR), produced the 1.2 percent CAGR in passenger revenue.

Other Operating Revenue

Other operating revenues derive from advertising, parking fees, commercial rents, and other miscellaneous sources. Collectively, these revenues grew from $106.1 million in 2015 to $140.5 million in 2019, yielding a 7.3 percent CAGR. Annual revenues were volatile, ranging from $103.6 million (2018) to the high of $140.5 million in 2019.

In summary, aggregate ridership declined, fares increased at a rate exceeding inflation, but the extent of ridership loss caused passenger revenues to grow at a less-than-inflationary rate (1.2 percent CAGR versus inflation at 1.6 percent CAGR). This trend was offset by strong, but volatile, growth in other operating revenues, which produced overall growth in operating revenue (1.9 percent CAGR) that exceeded inflation.

4.1.3 Operating & Maintenance Cost

Operating and maintenance (O&M) cost increased by 11 percent between 2015 and 2019, from $2.075 billion to $2.305 billion, or about 2.7 percent annually. The operating cost per VRM (i.e., unit cost) increased at 2.8 percent annually. This rate of growth exceeded the CPI-U for the New York metropolitan Area, which increased at 1.6 percent annually. This implies real (i.e., net of inflation) growth in operating unit cost of 1.2 percent annually.

Increases in O&M cost varied widely across its constituent elements:

- Labor and fringe benefits cost, which accounted for 57 percent of O&M cost, grew at a 3.3 percent CAGR.
- Services, which accounted for 7 percent of O&M cost, grew at a 2.5 percent CAGR.
- Fuel and power, which accounted for 5 percent of O&M cost, declined at a 10.7 percent CAGR.
- Materials and supplies, which accounted for 8 percent of O&M cost, grew at a 4.6 percent CAGR.
- Purchased transportation, which accounted for 10 percent of O&M cost, grew at a 2.6 percent CAGR.
- All other costs, which accounted for 12 percent of O&M cost, grew at a 5.7 percent CAGR.

Among these trends, the decline in fuel and power cost is notable. NJT states this decline results from a combination of declining fuel prices and NJT's ability to initiate timely fuel hedges that protect it from cost increases. Most of the decline in fuel and power cost occurred between 2015 ($152.4 million) and 2017 ($94.3 million). Since 2017, fuel and power costs have been stable. Excluding fuel and power, O&M costs between 2015-2019 grew at a 3.5 percent CAGR.

4.1.4 Operating Subsidy

Operating subsidy is calculated as operating cost minus operating revenues.

Between 2015 and 2019, operating subsidy requirements for increased by 15 percent, from $1.040 billion in 2015 to $1.191 billion in 2019. This yields a 3.5 percent CAGR. This was due to operating revenues growing at a slower pace (1.9 percent annually) than operating costs (2.7 percent annually).

The operating subsidy requirements were funded from Federal and State sources:

- Federal grants applied to operations, primarily for capitalized maintenance, accounted for 45 percent of operating subsidies between 2015 and 2019. Although the general trend was downward (-7.7 percent CAGR), the annual

amount of Federal funds was highly variable, ranging from a high of $615 million in 2017 to a low of $387 million in 2019.

- State funds accounted for 55 percent of operating subsidies between 2015 and 2019. The general trend was upward (12.3 percent CAGR), but was influenced by a large increase in State funds in 2019 ($804 million), compared to the prior four years (average $565 million).

In summary, NJT operating results indicate stable service levels having a fairly low rate of O&M cost growth, but requiring a growing amount of State operating assistance. The growth in State operating subsidy was necessitated by low growth in operating revenues and a decline in the amount of Federal funds transferred from the capital program to capitalized maintenance. NJT was able to fund all O&M costs from current revenues.

4.2 TRANSIT CAPITAL

The analysis of NJT's capital focused on trends in revenue fleet age, and trends in the sources and uses of capital funds. Detailed data supporting the analysis are presented in Appendices E and F.

NJT revenue fleet age in 2019 is similar to the national average for all its fleets. Average annual capital expenditures for the existing system (i.e., excluding certain one-time projects) increased steadily between 2015 and 2019. Capital projects have been financed from current revenues and long-term bond proceeds.

4.2.1 Revenue Fleet Age

The trend in revenue fleet age is presented in Appendix E for each mode operated by NJT. The age of all fleets was generally in line with the national average:

- The age of the bus fleet increased from 7.5 years in 2015 to 8.5 years in 2019. The fleet age in 2019 is slightly older than the national average (7.6 years). The bus fleet is the focus of this analysis, since FTA uses bus fleet age in its evaluation and rating of CIG projects. The trend in fleet age indicates that NJT is replacing buses in accordance with their useful life, producing some year-to-year variation in fleet age due to the age profile of the fleet (i.e., an unequal number of buses per year of purchase).
- The age of the commuter rail fleet increased from 16.8 years in 2015 to 20.8 years in 2019. The age in 2019 is comparable to the national average (21 years). This type of age progression is normal, because rail fleets have a long useful life, and consequently fleet replacement purchases are infrequent.

- The age of light rail fleet increased from 13.2 years in 2015 to 17.0 years in 2019. The age in 2019 is comparable to the national average (17 years). This type of age progression is normal, as explained for commuter rail above.
- The age of hybrid rail fleet increased from 13.0 years in 2015 to 17.0 years in 2019. The age in 2019 is comparable to the national average (18 years). This type of age progression is normal, as explained for commuter rail above.
- The age of the demand response fleet decreased from 4.2 years in 2015 to 3.5 years in 2018 (2019 data are not available). The age in 2018 is less than the national average (5 years). The trend in fleet age indicates that NJT is replacing demand response vehicles in accordance with their useful life, producing some year-to-year variation in fleet age due to the age profile of the fleet (i.e., an unequal number of vehicles per year of purchase).
- The age of the vanpool fleet decreased from 3.0 years in 2015 to 2.0 years in 2018 (2019 data are not available). The age in 2018 is less than the national average (4 years). The trend in fleet age indicates that NJT is replacing vanpool vehicles in accordance with their useful life, producing some year-to-year variation in fleet age due to the age profile of the fleet (i.e., an unequal number of vehicles per year of purchase).

In summary, for the revenue vehicle fleet having a regularly-occurring replacement cycle, NJT has been replacing vehicles as needed, consistent with industry practices.

4.2.2 Trends in the Sources & Uses of Capital Funds

The five-year trend (2015-2019) in annual sources and uses of NJT capital funds is presented below and shown in Appendix F. These figures derive from the approved NJT capital budget for each fiscal year.

Between 2015 and 2019, about 55 percent of NJT capital funds were applied to state of good repair (SGR) projects, and about 32 percent was transferred to the operating budget for capital maintenance. The remaining funds were applied primarily to debt service and other operating uses (9 percent), transferred to other entities (3 percent), and applied to expansion projects (1 percent).

Capital funding was highly variable year-to-year, due primarily to one-time resiliency projects necessitated by damage caused by Hurricane Sandy. In order to define benchmarks for interpreting the capital financial plan forecast presented in section 5.2 of this report, the historical values are summarized as average annual 2020 dollars.

Sources of capital funds

NJT's sources of capital funds totaled $7.82 billion over the period 2015-2019. Annual capital funds varied considerably, ranging from a low of $1.2 billion (2015) to a high of $2.1 billion (2016), and averaged $1.64 billion per year in 2020 dollars. Much of this annual variability is attributed to one-time resiliency projects associated with Hurricane Sandy (2012). When these funds are excluded, capital funding grew more or less steadily, from $1.20 billion in 2015 to $1.46 billion in 2019, totaling $6.48 billion. These funds averaged $1.36 billion per year in 2020 dollars.

The individual sources of capital funds were as follows:

- Federal formula grants totaled $2.47 billion (31.6 percent of total capital funds), comprised of Section 5307 Urbanized Area formula funds, Section 5337 State of Good Repair (SGR) funds, Section 5339(a) Bus and Bus Facility funds, Section 5310 Enhanced Mobility funds, and Section 5311 Rural grants. Collectively, the grant funds varied between $467 million and $518 million annually, and averaged $518 million per year in 2020 dollars.
- Funds from Federal flexible funding programs, including the Surface Transportation Block Grant (STBG) program and the CMAQ program, totaled $0.83 billion (10.6 percent of total). These grant funds varied between $76 million and $228 million annually, and averaged $175 million per year in 2020 dollars.
- Funds from FTA's Emergency Relief Program for recovery, relief and resilience efforts in areas affected by Hurricane Sandy (for Resiliency projects), totaled $1.26 billion (16.2 percent of total). The funds from this competitive grant program were included in NJT's capital budget for fiscal years 2016 ($0.87 billion) and 2017 ($0.39 billion) only.
- Funds from the NJTTF, for on-going NJT capital programs, totaled $2.97 billion (38.0 percent of total). The NJTTF receives a variety of revenues from state taxes and fees, including motor fuel taxes and commercial vehicle taxes and fees. Annual NJTTF funds appropriated to NJT's capital program increased steadily between 2015 and 2019, growing from $471 million in 2015 to $810 million in 2019, a 72 percent increase. This extraordinary rate of growth is due partly to the October 2016 reauthorization of the NJTTF, which increased annual funding by 25 percent. NJTTF funds appropriated to NJT averaged $620 annually in 2020 dollars.
- NJTTF funds applied to Resiliency projects totaled $70.6 million (0.9 percent of total). These funds were included in NJT's capital budget for fiscal years 2016 ($41.6 million) and 2017 ($29.0 million) only.
- Other sources of capital funds totaled $0.21 billion (2.6 percent of total). The funds derive from local match for Section 5311 funds, casino revenue funds,

and other miscellaneous sources. These funds varied between $25 million and $61 million annually, and averaged $43 million per year in 2020 dollars.

In all, Federal funds accounted for 58 percent of the 2015-2019 total, State funds accounted for 39 percent, and other miscellaneous sources accounted for the remaining 3 percent. Excluding Resiliency funds, the funding shares were 51 percent Federal, 46 percent State, and 4 percent Other.

Uses of capital funds

NJT's uses of capital funds (i.e., expenditures) totaled $7.82 billion over the period 2015-2019. The uses of funds by category of expenditure were as follows:

- Capital improvements on the existing system for SGR totaled $2.88 billion, or about 37 percent of total uses, and averaged $602 million annually in 2020 dollars. These funds were applied as follows: rail infrastructure improvements, $988 million; rail rolling stock, $512 million; rail station improvements, $269 million; bus and light rail improvements, $666 million; and systemwide improvements, $446 million. Annual expenditures increased steadily, from $461 million in 2015 to $727 million in 2019, yielding a 12.1 percent CAGR. This high rate of growth underscores NJT's increasing commitment to meeting its SGR needs.
- Resiliency projects on the existing system, necessitated by damage associated with Hurricane Sandy, are also categorized as SGR projects. These expenditures totaled $1.42 billion, or about 18 percent of total uses. The annual expenditures were highly variable, and occurred in three of the five years included in the look-back period (2016, 2017, and 2018). The average annual expenditure in 2020 dollars was $301 million.
- Operations, maintenance, and debt service cost for the existing system totaled $3.20 billion, or about 41 percent of total uses, and averaged $671 million annually in 2020 dollars. Annual expenditures in YOE dollars ranged between $594 million and $674 million, with no discernible trend. Of the total $3.2 billion expended between 2015 and 2019, approximately $2.49 billion was transferred to the NJT operating program for capitalized maintenance. The remainder was applied to debt service and other operating costs.
- Expenditures for expansion projects totaled $89.0 million, or about 1.1 percent of total uses. These funds were applied to several light rail extension projects. The average annual expenditure in 2020 dollars was $18 million.
- Capital funds passed through to other entities totaled $232 million, or about 3 percent of total uses. The average annual expenditure in 2020 dollars was $49 million. The financial plan did not identify the entities to which these funds were provided.

In summary, the capital funds were used primarily for SGR projects on the existing system (55 percent of total), and transfers to the operating program for capitalized maintenance (32 percent). Expenditures for SGR projects on the

existing system increased significantly (12.1 percent CAGR) between 2015 and 2019.

4.3 FINANCIAL MANAGEMENT

NJT has adequate liquidity, and its debt load has declined steadily over the past five years. The findings are discussed below.

4.3.1 Liquidity

Liquidity is a measure of the ease with which an entity can meet its financial obligations with the liquid assets (i.e., cash or items readily convertible to cash) under its control. NJT is observed to have improving liquidity over the period 2015-2019, even though the metrics used to measure liquidity would normally signal some concern. The metrics used by the FC are the same as those used in financial capacity assessments for all CIG projects – the current ratio (i.e., current assets divided by current liabilities) and working capital (i.e., current assets minus current liabilities). Both metrics were calculated from the audited financial statements provided by NJT.

A current ratio of 1.0 or higher indicates adequate resources to meet financial obligations coming due. The NJT current ratio stayed below 1.0 for all five years between 2015 and 2019, but increased from 0.81 in 2015 to 0.90 in 2019. Because current liabilities exceeded current assets for the entire five-year period, NJT's working capital was negative. However, as was the case with the current ratio, working capital, improved over the five-year period, from a negative $176 million in 2015 to a negative $68 million in 2019. Though the trend improved (i.e., became less negative), this dearth of working capital could have limited NJT's flexibility in addressing short-term cash needs from internal funding sources.

However, it is important to note that the trends in NJT's liquidity do not necessarily create a dire situation, for several reasons. First, all of NJT's debt is secured either by Federal grants or by State appropriations. This means that the interest due in the coming year is included in current liabilities, while the grant funds and State appropriations that secure the debt are not included in current assets. Second, NJT has a $300 million line of credit (LOC). The LOC had an available balance of $185 million at the close of fiscal year 2019, which far exceeded NJT's negative working capital (-$68 million). Finally, as a component unit of the State of New Jersey, it is conceivable that NJT could access additional State funds on an emergency basis. Thus, even though NJT's current ratio is less than 1.0, it has access to sufficient resources to meet its financial obligations.

4.3.2 Debt

NJT uses a combination of long-term debt, capital leases, and short-term debt to meet its financing requirements. The 2015-2019 trend in outstanding debt for each of these types of debt is presented in Appendix G.

Long-term debt, labeled as Notes Payable in Appendix G, consists of grant anticipation notes (GANs) and bonds issued by NJEDA on NJT's behalf. The GANs are secured by the anticipated receipt of FTA formula grant funds, and mature in 2021. The NJEDA bonds are secured by rental payments, from NJT to NJEDA, that are appropriated to NJT by the State of New Jersey, and mature in 2027. There is, effectively, a 1.0 debt service coverage requirement on the NJEDA bonds, and additional parity bonds may be issued so long as no default has occurred. Outstanding long-term debt declined from $1.28 billion in 2015 to $0.84 billion in 2019, a 34 percent reduction.

NJT uses capital leases to procure rolling stock. NJT's obligations under capital leases declined from $571 million in 2015 to $227 million in 2019, a 60 percent reduction.

NJT has a $300 million LOC, established in 2015, that is secured by a GAN. The LOC is intended to assist NJT in meeting its operating cash requirements for expenditures that are eligible for reimbursement from the FTA, Section 5307 and 5337 Formula Funds. The year-end outstanding balance on the LOC has varied between $75 million and $200 million. The outstanding LOC balance was $115 million at the end of fiscal year 2019, leaving an available balance of $185 million.

In all, NJT's use of debt declined considerably in the past five years, falling from $1.85 billion in 2015 to $1.18 billion in 2019, a 36 percent reduction. Outstanding debt as a percentage of net capital investment (i.e., the total cost of capital assets, net of depreciation, minus outstanding debt), fell from 33 percent in 2015 to 22 percent in 2019. This is indicative of improved financial condition, in that fewer future resources are required to finance current investment in capital projects.

4.4 CASH FLOW

Over the 2015-2019 period, NJT's cash flow has been essentially neutral. That is, the sources and uses of operating funds ($11.0 billion) were materially the same, and the sources and uses of capital funds ($7.82 billion) were materially the same.

The neutral cash flow for operations occurs because NJT uses State operating assistance to fund the portion of operating cost that is not otherwise funded by operating revenues and other sources of operating assistance. NJT is required to maintain a balanced operating budget. While this arrangement helps protect

against operating deficits, it also means that NJT does not generate an operating surplus that may be held as a cash reserve.

The neutral cash flow for the capital program, as demonstrated in the historical sources and uses of funds provided by NJT, occurs for two reasons: (i) NJT used approved capital budgets (which are balanced) for the historical data, rather than actual inflows and outflows of capital funds; and (ii) all sources of capital funds are provided by entities external to NJT. In reality, NJT uses short-term financing to cover funding gaps caused by differences in the timing of capital expenditures and the receipt of Federal, State, and local funds that ultimately are used to pay those capital costs. Even if NJT presented the historical sources and uses of capital funds on a cash basis, this picture would change very little – it would be rare for a capital surplus to occur (since all costs are funded externally), and cash deficits would be avoided through the use of short-term financing.

However, one feature of this approach to cash flow management affects the assessment of the financial forecast – the accumulation of appropriated funds that have not been expended. NJT indicates that as of the end of fiscal year 2019, $7.0 billion in budgeted capital funds had not been expended. This total consists of $5.43 billion in Federal funds, and $1.57 billion in State funds. NJT indicates that prior year appropriations are encumbered, and thus are available when the capital project expenditures occur.

In summary, NJT operated and maintained a consistent level of service over the five-year period 2015-2019, was able to pay current costs from existing revenues, has maintained adequate liquidity, and has reduced its use of debt to finance capital improvements.

5. System-Wide Financial Capability

This section of the report addresses NJT's financial capability to sustain existing transit services while implementing the Project. NJT's forecasts indicate that it has the financial capability to sustain existing operations and to fund its SGR program. However, NJT's operating forecast assumes extraordinary growth in passenger revenues that contradicts historical trends.

5.1 OPERATING FINANCIAL PLAN

The operating financial plan presents a forecast of O&M costs, operating revenues, and operating assistance for the period 2020-2039, with the adopted 2020 budget as the starting point. Due to the perturbations associated with the Covid-19 pandemic, the analysis of the reasonableness of the NJT's operating plan focused on the period 2023-2039. By 2023, NJT assumes that it will be able to restore pre-pandemic service levels, and will maintain that service level moving forward. Thus, the 2023-2039 portion of the forecast is stable, and can be compared to trends that were evident 2015-2019, described in section 4.1.

This analysis finds that the Project will have an insignificant impact on NJT operations. The forecasts of systemwide O&M costs, non-fare operating revenues, and operating assistance are reasonable. The forecast of passenger revenues is very optimistic, and is subjected to a stress test in section 6 of this report. Additional details regarding the reasonableness of the operating financial plan are presented in the remainder of this section 5.1.

5.1.1 Impact of the Project

The planned substantial completion date for the Project is June 2026. The first full year of operation will be fiscal year 2027.

The primary impact of the Project will be to reduce delays associated with mechanical malfunctions of the existing Portal Bridge, and to improve efficiency due to the higher operating speeds that the new bridge will enable. NJT stated in the financial plan that the existing Portal Bridge experienced 18 "major incident" days (defined as a minimum of five hours of delay to Amtrak and/or NJT trains), resulting in cumulative delays of ~780 hours, in the 2014-2018 period, excluding delays due to normal bridge openings for marine traffic. These reliability issues also constrain NJT's ability to run longer trainsets.

The operating impact of the Project can be quantified with respect to direct operating costs and revenues, which are very modest in comparison to NJT operations as a whole:

- The direct operating and maintenance (O&M cost) for the bridge will be reduced when the new bridge is constructed, because a trouble-prone, swing-type drawbridge will be replaced with a high-level fixed span bridge requiring far less maintenance. However, the O&M cost of the current bridge, in a "no build" scenario, is projected to be just $1.8 million at 2027. Thus, the direct O&M savings will be insignificant in comparison to the O&M cost of the overall NJT system, which is forecast to total $3.10 billion in 2027.
- The Project will add cars and seating capacity to existing trains. However, NJT assumes an immaterial change to service levels (restoration to 2018 service levels only) over the period of the financial plan (2020-2039). In the first full year of operations, NJT assumes its rail fleet will increase by 44 vehicles (3.0 percent), and its bus fleet will decrease by 104 vehicles (minus 3.3 percent), relative to the current system.
- The Project is forecast to have no net effect on operating revenues.

Thus, the Project's impact on system-wide transit operating cost and operating revenues is forecasted to be minimal.

5.1.2 Operating Cash Flow

This section of the report describes the forecasts of operating costs, operating revenues, and operating assistance, and evaluates their combined effect in the operating cash flow.

Systemwide O&M Costs

NJT systemwide O&M costs are forecast to total $67.78 billion over the period from 2020 through 2039, growing from $2.39 billion in 2020 (adopted budget) to $4.44 billion in 2039. The compound annual growth rate (CAGR) is 3.3 percent.

The forecast assumes a recovery to pre-pandemic service levels by 2023. NJT modeled several operating scenarios associated with recovery from the pandemic. The operating scenario used in the financial plan assumed a "return to normality" by July 2022, which is the beginning of FY 2023. At that time, NJT assumes the restoration of 2018 services (i.e., prior to minor cutbacks associated with PTC installation in 2019). NJT assumes no net change to service from that point forward. Due to the perturbations in service levels and operating costs associated the pandemic, affecting fiscal years 2021 and 2022, the analysis of the reasonableness of the O&M cost forecast focuses on the period 2023-2039. The trend in this steady-state forecast can then be compared to 2015-2019 actual operating results.

The O&M forecast is based on line-item cost escalation rates, applied to the 2020 budget, that take into account the service assumptions noted above. The net result is a 3.0 percent CAGR for the period from 2023 through 2039. This is a slightly

lower growth rate than for 2020-2039 because it omits extraordinary pandemic-related cost growth projected for 2021 and 2022. Since the level of service (e.g., vehicle revenue miles, or VRM) is assumed to be constant from 2023-onwards, this CAGR also approximates growth in unit costs. This rate of cost growth is higher than the inflation forecast (2.3 percent CAGR), implying that the O&M forecast assumes about 0.7 percent real cost growth.

Historically (2015-2019), operating costs grew at a 2.8 percent CAGR, with inflation of 1.6 percent CAGR, implying that real unit cost increased at a 1.2 percent CAGR.

The system-wide O&M forecast is reasonable. The forecasted unit cost CAGR (3.0 percent) is higher than the historical unit cost CAGR (2.8 percent). The implicit real unit cost growth (0.7 percent) in the forecast is less than that experienced historically (1.2 percent), but not significantly so.

Systemwide Operating Revenues

NJT operating revenues are forecast to total $39.28 billion over the period from 2020 through 2039, which would cover roughly 58 percent of total O&M costs over that same period. Operating revenues consist of passenger revenue ($36.41 billion), and other operating revenues ($2.88 billion). Other operating revenues include park & ride fees, Metro North interline revenue, special service revenue, concessions, advertising revenue, ticket sales commissions, contract revenue, rental income, investment income, and other miscellaneous sources. Operating revenues are forecast to grow from $1.10 billion in 2020 to $3.05 billion in 2039, yielding a CAGR of 5.5 percent

Passenger revenues are forecast to grow from $0.99 billion in 2020, to $2.86 billion in 2039, yielding a CAGR of 5.8 percent. In 2027, the first full operating year for the Project, these funds total $1.59 billion. Passenger fare revenues are considered committed, since NJT is empowered to set fares, and fare revenues are not subject to any external approvals, although public hearings are required by Federal law (Title VI, Civil Rights Act, 1964).

The forecasted growth in passenger fares (5.8 percent CAGR) is produced by a combination of ridership growth (0.8 percent annually, on average) and fare increases projected to occur in 2025 (20 percent), 2030 (15 percent), and 2035 (15 percent). The fare increases compound to a 59 percent increase in fares for the forecast, or a 2.5 percent CAGR. NJT included a price elasticity factor of -0.1 in their forecast of fare revenues to account for ridership lost when fares are raised (i.e., 0.1 percent loss in ridership for each 1.0 percent increase in fares). The elasticity factor is at the low end of what may be expected to be reasonable. This is because NJT service is highly oriented to the commuter market, but not exclusively so, and non-commute markets typically have a higher fare elasticity.

Although the fare increases assume a -0.1 price elasticity, two other features of the fare revenue forecast serve to increase fare revenues beyond what would be

implied by the fare increases alone. In 2023, there is an unexplained 20 percent increase in passenger revenue and the average fare. Relative to 2019 pre-pandemic fare revenue ($0.97 billion), the 2023 forecast ($1.15 billion) yields a 4.4 percent CAGR, which is a sharp departure from NJT trends. Also, in the year following each of the stated fare increases, there appears to be a double-counting of the net revenue increase occurring in the prior year.

Historically, (2015-2019), passenger revenue increased at 1.2 percent annually, while ridership fell at -0.8 percent annually. There was one fare increase (9 percent) in this period, occurring in October 2015.

The passenger revenue forecast is very optimistic, for the following reasons: (i) the overall forecasted growth rate (5.8 percent CAGR) substantially exceeds the historical growth rate (1.2 percent CAGR); (ii) the percentage increase in fares is higher (15 percent to 20 percent) than occurred in the recent past; and (iii) the ridership growth rate implied in the passenger revenue forecast (0.8 percent) is higher than the historical -0.8 percent CAGR decline.

Other operating revenues are forecast to grow from $118 million in 2020 to $189 million in 2039, yielding a CAGR of 2.5 percent. This rate of growth is less than historical norms – other operating revenues grew at a 7.3 percent CAGR in the past five years (2015-2019), and grew at a 4.5 percent CAGR over the past ten years (2010-2019). The forecast is reasonable in this context. In 2027, the first full operating year for the Project, other operating revenue totals $132 million. These operating revenues are considered committed because they are existing sources controlled by NJT and are not subject to any external approvals.

In summary, the operating revenue forecast is very optimistic, since the combined growth rate for passenger revenues and other operating revenues (5.5 percent) substantially exceeds the growth observed in the past five years (2015-2019, 1.9 percent) and the past ten years (2010-2019, 3.0 percent).

Operating Assistance

NJT receives operating subsidies from State and other sources to fund the gap between O&M costs and operating revenues. The NJT forecast of operating assistance totals $32.69 billion for the period from 2020 through 2039. This equates to 48.2 percent of total O&M costs during that same period. The forecast of operating assistance yields a CAGR of 1.3 percent for the forecast period.

The forecast of NJT operating assistance consists of the following components:

- *State operating assistance, $18.79 billion (27.7 percent of O&M cost).* State operating assistance, which requires annual appropriation by the state legislature, may be provided from a variety of sources – casino revenues, New Jersey Turnpike revenues, general fund revenues, and others. State operating

assistance is forecast to grow from $669 million in 2020 to $994 million in 2039, yielding a 2.1 percent CAGR. When converted to 2020 dollars using the forecasted CPI-U, the State operating assistance forecast averages $747 million annually. Historically, State operating assistance has been variable, yielding a CAGR of 8.9 percent between 2015 and 2019, and averaging $446 million annually in 2020 dollars. The historical CAGR is greatly influenced by large increases in 2017 and 2019, and consequently the average annual 2020 dollars comparison is considered more meaningful. In this context, the State operating assistance forecast is considered very optimistic, because it averages $747 million annually in 2020 dollars, versus historical funding of $446 million annually, in 2020 dollars, or an increase of 67 percent. In 2027, the first full operating year for the Project, State operating assistance totals $978 million. These funds require annual appropriation, and are therefore considered planned.

- *State capital transfers, $1.98 billion (2.9 percent of O&M cost).* These funds derive principally from the NJTTF, and are used for activities such as preventive maintenance and some SGR activities. The forecast assumes that the $99 million budgeted in 2020 will remain constant through the end of the forecast (i.e., zero growth). In the past five years (2015-2019), state capital transfers were very low (average $6 million annually) until 2019, when $134 million was transferred. Since the funds derive from the NJTTF, for which the funds forecast is considered reasonable (see analysis in section 5.2), the forecast of state capital transfers is considered reasonable. . In 2027, the first full operating year for the Project, State capital transfers total $99 million. These funds require annual appropriation, and are therefore considered planned.
- *Other State reimbursements, $3.16 billion (4.7 percent of O&M cost).* This source is forecast to grow slowly, from $136 million in 2020, to $174 million in 2039, yielding a CAGR of 1.0 percent, and averaging $126 million in 2020 dollars. The sources of Other State Reimbursements were not described in the financial plan. In the past five years (2015-2019) this source averaged $162 million in 2020 dollars. Because the historical annual funding was variable, the average annual 2020 dollars comparison is considered more meaningful. The forecast is reasonable in this context. In 2027, the first full operating year for the Project, Other State Reimbursements total $154 million. These funds require annual appropriation, and are therefore considered planned.
- *Federal capital transfers, $7.24 billion (10.7 percent of O&M cost).* These transfers are programmed in the capital budget for capitalized maintenance activities, and are funded from Section 5307 and Section 5337 formula grants. The annual forecast assumes the $362 million budgeted in 2020 will remain constant through the end of the forecast (i.e., zero growth). Given that the overall forecast of Section 5307 and Section 5337 formula grants is considered conservative (see analysis in section 5.2), the forecast of Federal capital transfers is considered conservative. In 2027, the first full operating

year for the Project, Federal capital transfers total $362 million. These funds are considered budgeted, since they derive from formula allocations that are programmed at NJT's discretion, within the bounds of eligible grant uses.

- *Other Federal Reimbursements, $1.52 billion (2.2 percent of O&M cost).* These funds include Section 5310 and other sources that are used to pay for costs that are considered operating expenses instead of capitalized expenditures. These funds are forecast at $22 million annually, except for extraordinary funds (approximately $1.08 billion) expected to be received in fiscal years 2021 and 2022 in Federal pandemic relief (the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act). In the past five years (2015-2019), Other Federal Reimbursements ranged from $27 million to $58 million annually, and averaged $37 million in 2020 dollars. The forecast is conservative in this context. In 2027, the first full operating year for the Project, Other Federal Reimbursements total $22 million. A breakdown of these sources of other Federal funds was not included in the financial plan. Since supporting documentation was not provided, these funds are considered planned.

NJT used a combination of very optimistic, reasonable, and conservative assumptions to develop the forecasts of the individual sources of operating assistance. When all sources are considered together, operating assistance is forecast to grow at a 1.3 percent CAGR, 2020 to 2039. This rate of growth is less than the 2015-2019 CAGR of 3.5 percent. In this context, the overall operating assistance forecast is reasonable.

Operating Cash Flow

The operating cash flow presents a cumulative surplus of $4.19 billion at 2039, which is the difference between total sources of operating funds ($71.97 billion, inclusive of operating revenues and operating assistance) and total operating cost ($67.78 billion).

The financial plan notes that NJT is required by law to have a balanced operating budget. Actual outcomes may differ from this requirement, but the differences are typically very small. For example, over the past ten years (2010-2019), NJT generated an operating surplus of $26.7 million, which was 0.1 percent of total operating cost over that period. In the past five years, NJT realized a $5.9 million operating deficit, which was -0.1 percent of operating cost. Thus, it is doubtful that NJT would generate the extent of the operating surplus that is forecasted for the period 2020-2039. Rather, it is more likely that allocations of Federal and, especially, State funds to NJT operations would be reduced, and in the case of Federal funds, applied to the capital program. Thus, based on law and NJT's performance over the past ten years, a balanced operating outcome is reasonable to expect (within limits of the affordability of operating assistance), but the generation of a large operating surplus is not.

No information is provided in the financial plan regarding a beginning cash balance, or annual ending cash balances. However, NJT's 2019 annual financial report, statement of net position, indicates that NJT has negative working capital; that is, current liabilities ($659.0 million) exceed current assets ($591.1 million) by $67.9 million, or about 3 percent of the current (2020) operating budget ($2.39 billion). This equates to about 1.5 weeks of operating expenses. Since the operating forecast can reasonably be considered to be balanced, the negative working capital would continue to exist. Although the financial plan notes that current liabilities include substantial interest and lease costs coming due the following year (approximately $251 million in 2019), with no off-setting funds that may be reasonably expected to be available in the following year (e.g., Federal formula funds used to pay interest cost on capital leases) no information was provided by NJT to clarify its capacity to fund an increase in operating costs or a shortfall in operating revenues. Thus, NJT is interpreted to have zero financial capacity to fund higher operating costs, or to fund a shortfall in its various sources of operating funds.

In summary, most elements of the operating financial plan are reasonable (i.e., operating costs, operating assistance). However, the passenger revenue forecast is very optimistic, and because passenger revenues are assumed to fund more than half of operating cost, this assumption has a material effect on the financial forecast. Accordingly, the passenger revenue forecast is subjected to a stress test in section 6 of this report.

For the purpose of assessing local financial commitment (see section 8), in the first full year of the Project's operation (2027), 62.4 percent of operating funds are committed or budgeted, and 37.6 percent of operating funds are considered planned. These percentages are calculated based on total operating funds forecast for 2027 ($3.34 billion), and the categorization of each operating funding source described in the foregoing section.

5.2 CAPITAL FINANCIAL PLAN

This section of the report describes the NJT capital financial plan, focusing on the elements of the capital program separate and apart from the Project. The capital financial plan is described three parts – sources of funds, uses of funds, and cash flow.

Due to year-to-year variation in the capital program, the FC's interpretation of the reasonableness of the forecast is based primarily on the average annual value, in 2020 dollars, for the 20-year forecast period, compared to the same calculation for the 2015-2019 period (see historical analysis in section 4.2).

The capital financial plan indicates that NJT has sufficient funds for the entirety of its capital program, and this outcome is based on reasonable forecasts of Federal, State, and other local capital funds.

5.2.1 Sources of Capital Funds

Capital funds are forecast to total YOE $36.28 billion for the period from 2020 to 2039. Capital funds are comprised of Federal grants ($12.65 billion), State and local funds ($16.63 billion), and unexpended funds from prior adopted capital budgets ($7.00 billion).

In the text that follows, total funding is expressed in YOE dollars, and ties directly to the NJT financial plan. The comparison of forecast and historical average annual funding, however, is expressed in constant 2020 dollars, to adjust for the effect of inflation on the receipt of capital funds and to smooth the effect of variations in year-to-year funding.

Federal funds

Federal capital funds for the period from 2020 through 2039 total $12.65 billion, and consist of: Section 5307 Urbanized Area formula funds, $6.19 billion; Section 5337 SGR funds, $4.29 billion; Section 5339 Bus and Bus Facility funds, $403 million; Section 5310 Enhanced Mobility funds and Section 5311 Rural grants, $246 million; and FHWA flexible funds (STP, CMAQ), $1.52 billion. The forecast assumes that Federal funding will increase from $604 million in 2020 to $652 million in 2039, yielding a CAGR of 0.4 percent. The average annual funding assumption, in 2020 dollars, is $507 million.

In the past five years (2015-2019), excluding extraordinary funds related to damage from Superstorm Sandy, Federal funds averaged $694 million in 2020 dollars. In 2019, Federal funds to NJT totaled $594 million. The Federal funds forecast for the NJT capital program is conservative in this context. The historical data, described in section 4.2.3, did not provide a breakdown by funding program, thus the assessment of the reasonableness of the forecast is based on aggregate funding, which consists of FTA formula grants, STBG, and CMAQ.

State and local funds

The reasonableness of the State and local capital revenue forecasts for the NJT system-wide capital plan is based on the forecast of NJTTF and NJTA funds, and a collection of other funding sources in the NJT capital financial plan that are referred to as “other capital funds”.

The NJTTF forecast (2020-2039) totals $15.62 billion. NJTTF revenues allocated to NJT are forecast to be $760 million annually 2020-2024, then rising to $767 million annually 2025-2030, then rising to $786 million annually 2030-2033, then rising to $806 annually 2034-2038, then $825 million in 2039. In 2020 constant dollars, the forecast averages $626 million annually. This forecast is reasonable in

comparison to actual NJTTF funding, 2015-2019, ($635 million annually in 2020 dollars). The forecast is conservative if compared to the 2017-2019 period ($700 million annually in 2020 dollars), when NJTTF funding was increased as noted in section 4.2.3.

NJTA revenues contributed to NJT are forecast to total $500 million for the period 2020-2039. These revenues are dedicated to the Portal North Bridge project, and were described in detail in section 3.1. The $25 million annual contribution will continue so long as the NJEDA bonds are outstanding. Given that the NJEDA bonds are expected to be issued in 2021 and have a 30-year term, the NJTA payments would be made through 2051. The forecast of NJTA funds is considered reasonable, since the forecast reflects the terms stated in the funding agreement.

The forecast of other capital funds totals $0.51 billion. These funds include: local match for Section 5311 funds, $38 million; casino revenue funds, $448 million; and other miscellaneous sources, $27 million. The average annual revenue, in 2020 dollars, is $20.7 million, whereas the historical 2015-2019 average annual funding from these sources, in 2020 dollars, was $43.0 million. Thus, the forecast is conservative in this context.

In all, the State and local funds total $16.63 billion, 2020-2039. The forecast is reasonable, given that the forecast for each source described above is considered to be either reasonable or conservative.

Unexpended Funds from Prior Adopted Capital Budgets

NJT identified $7.0 billion in funds that have been previously appropriated or programmed in prior approved capital budgets, but have not been expended. These funds include both State ($1.57 billion) and Federal ($5.43 billion) funds. Although this is the highest amount of unexpended funds carried forward over the past five fiscal years (2016-2020), the average of the prior four fiscal years was $6.20 billion, indicating that the $7.0 billion balance in 2020 is not out of line with NJT's experience.

In response to FTA questions, NJT stated that prior year appropriations are encumbered per fiscal period. NJT maintains a Capital Project Accounting System (CPAS), which records and monitors all appropriations/costs in the delivery of capital projects. CPAS interfaces with the NJT's various accounting systems such as the general ledger, payroll and purchasing, ensuring that all transactions are recorded, summarized and made available.

In summary, the forecast of capital funds is reasonable, based on the findings noted above for Federal, State and local, and unexpended prior-year funds.

5.2.2 Uses of Capital Funds

An assessment of the consistency and reasonableness of the capital cost forecast was based on the NJT capital program for the period 2020-2039.

The NJT capital cost forecast totals $33.89 billion from 2020 through 2039. Of this amount, $739 million is for the Portal North Bridge. This cost is a selective representation of the Project costs, in that it includes only debt service cost on NJEDA bonds and capital outlays for rail vehicles.

The remaining $33.15 billion of the capital program is for a wide variety of system preservation projects. Approximately $1.30 billion is for "resiliency" projects associated with improvements required by or related to Superstorm Sandy. The other system preservation program elements total $31.86 billion, and include: preventive maintenance, $9.32 billion; rolling stock, $13.06 billion; construction projects (e.g., facility and system rehabilitation and upgrades), $2.42 billion; and on-going programs (e.g., miscellaneous SGR and asset replacement), $7.05 billion. Excluding preventive maintenance, the system preservation elements total $22.53 billion.

The system preservation costs are generally consistent with the fleet replacement and rehabilitation actions described in the bus fleet management plan and the rail fleet management plan. The horizon year of the bus fleet management plan and the commuter rail fleet management plan is 2030. These fleet plans are reflected in the NJT ten-year capital program. After the plan horizon, the financial plan makes reasonable allowances for out-year fleet replacement and rehabilitation costs.

The $22.53 billion system preservation cost forecast converts to approximately $898 million annually in 2020 dollars, based on the CPI-U forecast of 2.4 percent annually. This figure exceeds the 2015-2019 annual average expenditure of $651 million (2020 dollars) for system preservation (i.e., excluding preventive maintenance and resiliency projects), indicating that NJT anticipates greater relative investment in SGR than has historically been the case.

5.2.3 Capital Program Cash Flow

The NJT capital cash flow for the period 2020-2039 includes sources totaling $36.28 billion, and uses totaling $33.89 billion, resulting in a surplus of $2.39 billion at the forecast horizon (2039), as well as a positive cumulative surplus in each year of the forecast.

The capital funding surplus occurs because the plan includes sources of funds when they are authorized or apportioned, and expenses when they are projected to be incurred. This surplus, however, does not denote a cash balance, because capital funds are project-specific and are not actually transferred to NJT in

advance of project expenditures. NJT has not made clear whether any apparent surplus occurring as described here can actually be made available to a project other than the project for which the funds are programmed. Thus, NJT's capital program is considered to have a neutral cash flow, with revenues balanced to expenditures.

In summary, the capital financial plan presents a balanced budget, and this outcome rests on reasonable assumptions of Federal, State, and other local capital funding support. Also, the forecast SGR expenditures is higher, on a constant-dollar basis, than NJT has expended over the past five years. Thus, NJT has the financial capability to increase its investment in SGR while also implementing the Project.

* * * *

This section of the report has presented NJT's forecasts of its operating and capital programs. The operating financial plan indicates that NJT has the financial capability to sustain current operations, but this outcome rests on very optimistic assumptions regarding passenger revenue growth. The capital financial plan indicates that NJT's funding assumptions for Federal, State, and other local contributions are reasonable, which attests to NJT's financial capability to meet its SGR needs.

6. Stress Tests

The purpose of the stress tests is to evaluate the sensitivity of the financial plan to plausible, adverse changes in key assumptions, and to gauge NJT's capacity to accommodate those changes.

Two stress tests were performed:

- *A 10 percent increase in Project cost.* This test is a standard stress test in FCAs, and is based on the construction cost estimate for the total PNB Project, inclusive of both public transportation and intercity rail components ($1,708 million). This approach is taken because NJT and Amtrak will share any cost increase that affects the entirety of the project. The stress test results in an additional funding requirement of $171 million. As detailed in section 3 of this report, NJT and Amtrak collectively have the financial capacity to pass this stress test, using currently committed and budgeted funds.
- *Lower growth passenger fare revenue.* MTA's forecasted passenger fare revenues were observed to grow at higher rate (5.8 percent CAGR) than the historical average 1.2 percent CAGR). The stress test assessed the effect of inflationary growth 2023-2039 (average 2.3%), accepting the forecast growth for 2019-2023. Total passenger revenue (2020-2039) falls from the baseline forecast of $36.4 billion to $26.1 billion, a decrease of $10.3 billion, or 28%. This decrease causes the baseline forecast operating surplus of $4.2 billion to become a $6.1 billion operating deficit, which equates to 9.1 percent of 2020-2039 operating cost.

Normally, stress tests performed in an FCA are combined to determine whether the project sponsor can accommodate all plausible, adverse changes to key assumptions. In NJT's case, however, that is not practical, given that its operating financial plan and the PNB project financial plan are completely separate, having no joint funding.

7. Conclusions

- The non-Section 5309 CIG share of the Project cost is 55.5 percent.
- All of the non-Section 5309 CIG funds are committed or budgeted.
- The PNB Project financial plan assumes $767 million in Section 5309 CIG funds for the Project, which is consistent with guidance provided by FTA to the NJT, the Project Sponsor.
- Financing costs attributable to NJEDA bonds and GANs used to fund Project costs are reasonable.
- NJT's current financial condition is sound, as of 2019, the most recent year for which audited financial results are available.
- Federal funds forecast to be available to other elements of the capital program through 2039 are conservative.
- State and local capital funds included in the 20-year forecast for capital expenditures are reasonable.
- The overall capital program envisions a 38 percent increase in SGR expenditures relative to the expenditure rate of the past five years, expressed in constant (i.e., inflation-adjusted) dollars.
- The Project is forecast to have an insignificant operating impact (less than 0.1 percent of NJT operating cost).
- The operating cost forecast is reasonable in comparison to recent experience.
- The passenger revenue forecast is very optimistic, evidenced by forecast growth of 5.8 percent CAGR versus historical growth of 1.2 percent CAGR.
- The forecast of non-fare operating revenues is reasonable.
- The forecast of operating assistance from existing revenue sources is reasonable in comparison to recent experience.
- The stress tests indicate that the PNB Project financial plan can accommodate a 10 percent increase in funding requirements, but that NJT cannot accommodate lower passenger revenue growth – inflationary growth from 2023-onward results in a cumulative $6.1 billion operating deficit by 2039, representing about 9 percent of cumulative operating costs (2020-2039).
- NJT does not have the financial capacity to pass the passenger revenue stress test, when all other assumptions are held constant. However, the stress test produces about the same annual growth rate (3.5 percent CAGR) in operating subsidy as NJT experienced historically. Accordingly, NJT is interpreted to have the financial capacity to withstand this stress test.

8. Local Financial Commitment Rating

Because the summary local financial commitment rating is Medium and the Section 5309 CIG share of the Project cost is less than 50 percent, the rating is raised one level to Medium-High, per policy.

8.1 CURRENT CAPITAL & OPERATING CONDITION

The current capital and operating condition is rated **Medium-Low**, based on the following criteria:

- The average bus fleet age is 7.7 years.
- The current ratio for 2019 is 0.90
- NJTTF bond ratings are Baa1 (Moody's), BBB+ (Standard & Poor's), and A- (Fitch) as of the date of this report.
- Positive cash flow
- No service cutbacks

Although the bus fleet age is consistent with a Medium rating, the current ratio is consistent with a Low rating, and the bond ratings are consistent with a Medium-Low rating. Per policy, there is a greater emphasis on the latter, thus the the financial condition rating is Medium-Low.

8.2 COMMITMENT OF CAPITAL & OPERATING FUNDS

The commitment of capital and operating funds is rated **High**, based on the following factors:

- 100 percent of non-Section 5309 New Starts funds are committed or budgeted (see section 3.1), consistent with a High rating.
- 62 percent of operating funds in the first full year of Project operation are committed (all committed funds are from existing sources controlled by NJT, not requiring appropriation; see section 5.1), consistent with a Medium-High rating.

Per policy guidance, there is a greater emphasis given to the capital funding commitment, the overall funding commitment rating is High.

8.3 FINANCIAL CAPACITY AND REASONABLENESS OF ASSUMPTIONS

Financial capacity and reasonableness of assumptions is rated **Medium-Low**, based on the following factors:

- Financial plan contains planning assumptions and revenue estimates that are more optimistic than recent historical experience, with respect to the passenger revenue fare forecast. All other assumptions and estimates are reasonable.
- NJT has access to additional funds, already committed or budgeted to cover at least a 10 percent Project cost increase or funding shortfall.
- In the Project's first full year of operations year (2027), the operating budget is considered to be balanced, with no reserves, thus providing no capacity to accommodate operating cost increases or funding shortfalls.

The composite local financial commitment rating is 3.0 (Medium), as follows: current condition rated Medium-Low, weighted at 25 percent; funding commitment rated High, weighted at 25 percent; and financial capacity rated Medium-Low, weighted at 50 percent. These subfactor ratings yield a composite score of 2.75, rounded to 3.0, or Medium. Because the summary local financial commitment rating is Medium, and the Section 5309 CIG share of the Project cost is less than 50 percent, the rating is raised one level to Medium-High.

Appendices

The following appendices are attached to this report:

- Appendix A: List of Documents Reviewed
- Appendix B: Sources of Project Funds
- Appendix C: Project Cash Flow
- Appendix D: NJT Operating Trend, 2015-2019
- Appendix E: Revenue Fleet Age, 2015-2019
- Appendix F: Sources and Uses of Capital Funds, 2015-2019
- Appendix G: Financial Management Metrics, 2015-2019
- Appendix H: 20-Year Financial Plan

Appendix A: List of Documents Reviewed

Appendix A: List of Documents Reviewed

Date	Source	Title
Sep-20	Bureau of Labor Statistics	CPI-U for the New York Metropolitan Area, Jan 2010-May 2020
Sep-20	New Jersey Transit	Portal North Bridge Project Financial Plan, and appendices
Oct-20	New Jersey Transit	Response to questions re transit asset management plan, forecast service levels
Oct-20	New Jersey Transit	Response to questions re Project Development Agreement, sensitivity tests, debt service forecast
Oct-20	New Jersey Transit	Revised Project Cost Estimate, funding plan, and sensitivity test
Sep-20	FTA	National Transit Database, 2015-2018

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Appendix B: Sources of Project Funds

APPENDIX B:
Sources of Project Funds

yoe$millions

Fiscal Year (ending 6/30)	Federal: Sec. 5309 CIG	Federal: CMAQ	Federal: Amtrak	subtotal, Federal	State of New Jersey [1]	total
Prior to 2020	-	-	-	-	26	26
2020	-	-	-	-	-	-
2021	248	-	-	248	591	839
2022	125	14	8	147	31	178
2023	100	-	46	146	26	172
2024	100	-	26	126	25	151
2025	100	40	12	152	35	187
2026	94	-	1	95	25	120
2027	-	3	-	3	24	27
2028	-	-	-	-	24	24
total	**767**	**57**	**93**	**917**	**807**	**1,724**
% of total	44.5%	3.3%	5.4%	53.2%	46.8%	100.0%

source: PNB Financial Plan, revised 10/23/20, Table 2.

notes:

1. Includes NJTA revenues, NJTTF appropriations, and NJEDA bonds.

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Appendix C: Project Cash Flow

APPENDIX C:

Sources and Uses of Project Funds by State Fiscal Year

yoe$millions

	Prior to 2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	total
Sources of Funds											
Federal:											
FTA Section 5309 CIG	-	-	248	125	100	100	100	94	-	-	767
Federal CMAQ	-	-	-	14	-	-	40	-	3	-	57
Amtrak Contribution	-	-	-	8	46	26	12	1	-	-	93
subtotal, Federal	-	-	248	147	146	126	152	95	3	-	917
State of New Jersey:											
NJTTF (FY18-FY19 approps	26	-	-	-	-	-	-	-	-	-	26
NJTTF (match for CMAQ)	-	-	-	4	-	-	10	-	-	-	14
NJTA	-	-	-	27	26	25	25	25	24	24	176
NJEDA Bonds	-	-	591	-	-	-	-	-	-	-	591
subtotal, State	26	-	591	31	26	25	35	25	24	24	807
Short-Term Financing (GAN)	-	-	-	-	-	12	(6)	(3)	(1)	(2)	-
total sources	26	-	839	178	172	163	181	117	26	22	1,724
Uses of Funds											
Construction Costs	4	6	44	156	620	379	228	53	39	15	1,544
Financing Costs:											
NJEDA bond issuance	-	-	3	-	-	-	-	-	-	-	3
NJEDA bond interest	-	-	-	27	26	25	25	25	24	24	176
GAN interest	-	-	-	-	-	-	-	-	-	1	1
total financing costs	-	-	3	27	26	25	25	25	24	25	180
total uses	4	6	47	183	646	404	253	78	63	40	1,724
Balance carried forward	22	16	808	803	329	88	16	55	18	-	na

source: PNB Financial Plan, revised 10/23/20, Table 2.

Note the State of New Jersey fiscal year ends June 30th.

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Appendix D: NJT Operating Trend, 2015-2019

APPENDIX D:
Operating Trends, 2015-2019

values in millions except where noted	2015	2016	2017	2018	2019	change, 2015-2019	% change, 2015-2019	CAGR, 2015-2019	avg annual 2020$
Operating Revenue									
Fare revenue	929.30	990.30	986.40	968.10	973.80	44.50	4.8%	1.2%	1,016.50
Other Operating Revenue	106.10	108.30	121.00	103.60	140.50	34.40	32.4%	7.3%	121.31
total operating revenue	1,035.40	1,098.60	1,107.40	1,071.70	1,114.30	78.90	7.6%	1.9%	1,137.81
Operating Cost									
Labor and Fringes	1,174.00	1,298.40	1,207.90	1,296.80	1,335.20	161.20	13.7%	3.3%	1,322.71
Services	149.90	171.80	158.30	164.50	165.40	15.50	10.3%	2.5%	169.78
Fuel & Power	152.40	131.90	94.30	97.70	97.00	(55.40)	-36.4%	-10.7%	120.72
Materials and Supplies	165.10	170.00	177.00	172.30	197.30	32.20	19.5%	4.6%	184.67
Purchased Transportation	221.90	223.50	212.50	245.30	246.30	24.40	11.0%	2.6%	240.81
Other	211.60	259.70	282.90	256.40	263.90	52.30	24.7%	5.7%	266.98
total operating cost	2,074.90	2,255.30	2,132.90	2,233.00	2,305.10	230.20	11.1%	2.7%	2,305.66
Operating Subsidy Required	1,039.50	1,156.70	1,025.50	1,161.30	1,190.80	151.30	14.6%	3.5%	1,167.86
Sources of Operating Subsidy									
State of New Jersey									
State Operating Assistance	368.20	390.30	427.00	427.00	518.60	150.40	40.8%	8.9%	445.74
Other State Reimbursements	133.10	192.50	154.40	140.30	151.80	18.70	14.0%	3.3%	162.02
State Capital Transfers	5.20	13.20	6.40	0.60	133.80	128.60	2473.1%	125.2%	32.52
total State operating assistance	506.50	596.00	587.80	567.90	804.20	297.70	58.8%	12.3%	640.28
Federal									
Federal Capital Transfers	475.20	505.10	403.10	584.80	359.70	(115.50)	-24.3%	-6.7%	488.71
Other Federal Reimbursements	58.30	33.10	29.20	29.70	27.30	(31.00)	-53.2%	-17.3%	37.45
total Federal funds	533.50	538.20	432.30	614.50	387.00	(146.50)	-27.5%	-7.7%	526.16
total operating subsidies	1,040.00	1,134.20	1,020.10	1,182.40	1,191.20	151.20	14.5%	3.5%	1,166.44
Annual surplus (loss)	0.50	(22.50)	(5.40)	21.10	0.40	na	na	na	na
Operating Metrics									
Unlinked Passenger Trips	275.73	276.24	268.36	263.99	266.64	(9.10)	-3.3%	-0.8%	na
Vehicle Revenue Miles (VRM)	160.19	159.78	159.61	161.88	159.59	(0.60)	-0.4%	-0.1%	na
Key Performance Indicators:									
Average Fare ($.¢¢)	3.37	3.58	3.68	3.67	3.65	0.28	8.4%	2.0%	3.76
Operating Ratio	49.9%	48.7%	51.9%	48.0%	48.3%	(0.02)	-3.1%	-0.8%	na
Fare Revenue per VRM ($.¢¢)	5.80	6.20	6.18	5.98	6.10	0.30	5.2%	1.3%	6.35
Operating Revenue per VRM ($.¢¢)	6.46	6.88	6.94	6.62	6.98	0.52	8.0%	1.9%	7.10
Operating Cost per VRM ($.¢¢)	12.95	14.11	13.36	13.79	14.44	1.49	11.5%	2.8%	14.39
Operating Subsidy per VRM ($.¢¢)	6.49	7.24	6.43	7.17	7.46	0.97	15.0%	3.6%	7.29
Unlinked Trips per VRM	1.72	1.73	1.68	1.63	1.67	(0.05)	-2.9%	-0.7%	na

Source: PNB financial plan, September 2020.
CAGR is the Compound Annual Growth Rate
See text of report for definitions of sources of operating assistance.
Average annual 2020$ is the sum of 2020$ values for each line item over the five-year period, divided by 5. The 2020$ values are calculated as the YOE$ value times the conversion factor. The 2020$ conversion factor is the ratio of the June 2020 CPI (282.33) to the CPI for each year.

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Appendix E: Revenue Fleet Age, 2015-2019

APPENDIX E:
Trend in Revenue Fleet Age, 2015-2019

	2015	2016	2017	2018	2019	change	% change	CAGR
Fleet Age in Years								
Motor Bus	7.6	8.3	9.3	9.6	8.5	0.9	11.8%	2.8%
Commuter Rail	16.8	17.6	18.6	19.8	20.8	4.0	23.8%	5.5%
Light Rail	13.2	14.1	12.9	16.0	17.0	3.8	28.8%	6.5%
Hybrid Rail	13.0	14.0	16.0	16.0	17.0	4.0	30.8%	6.9%
Demand Response	4.2	3.7	2.9	3.5	na	(0.7)	-16.7%	-5.9%
Vanpool	3.0	1.7	2.2	2.0	na	(1.0)	-33.3%	-12.6%

Source: 2015-2018, National Transit Database Annual Profiles, 2019 - Bus, Bus Fleet Management Plan, Oct. 2018. Rail fleet age assumes no new procurement in 2019.

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Appendix F: Sources & Uses of Capital Funds, 2015-2019

APPENDIX F:
Sources & Uses of Capital Funds, 2015-2019
based on NJT approved capital budgets

values in YOE$millions except where noted	2015	2016	2017	2018	2019	total, 2015-2019	% of total	avg annual, 2020$ [1]
SOURCES								
Federal Grants								
FTA Formula Funds	467.50	467.40	513.00	508.00	517.72	2,473.62	31.6%	518.26
FHWA Flex and CMAQ Funding	227.50	219.50	169.00	138.00	76.00	830.00	10.6%	175.43
Federal Resiliency Funding	-	871.40	393.00	-	-	1,264.40	16.2%	269.07
total, Federal funds	695.00	1,558.30	1,075.00	646.00	593.72	4,568.02	58.4%	962.76
State of New Jersey								
NJTTF (on-going programs)	470.50	461.90	554.00	676.00	810.00	2,972.40	38.0%	620.15
NJTTF (Resiliency projects)	-	41.60	29.00	-	-	70.60	0.9%	15.00
total, State funds	470.50	503.50	583.00	676.00	810.00	3,043.00	38.9%	635.14
Other Sources	37.70	37.70	25.00	45.00	60.52	205.92	2.6%	42.99
total sources	1,203.20	2,099.50	1,683.00	1,367.00	1,464.24	7,816.94	100.0%	1,640.89
total Resiliency funds	-	*913.00*	*422.00*	-	-	*1,335.00*	*17.1%*	*284.06*
total, excluding Resiliency funds	*1,203.20*	*1,186.50*	*1,261.00*	*1,367.00*	*1,464.24*	*6,481.94*	*82.9%*	*1,356.82*
USES								
Existing System								
Capital Improvements								
Rail Infrastructure Improvements	180.00	116.00	200.00	201.00	291.00	988.00	12.6%	206.06
Rail Rolling Stock Improvements	104.00	87.00	105.00	109.00	107.00	512.00	6.5%	107.26
Rail Station Improvements	46.00	82.00	64.00	47.00	30.00	269.00	3.4%	56.69
Bus/Light Rail Improvements	76.00	85.00	186.00	168.00	151.00	666.00	8.5%	138.87
Systemwide Improvements	55.00	92.00	65.00	86.00	148.00	446.00	5.7%	92.91
subtotal, improvements	461.00	462.00	620.00	611.00	727.00	2,881.00	36.9%	601.79
Resiliency Projects	-	913.00	422.00	80.00	-	1,415.00	18.1%	300.54
subtotal, capital expenditures	461.00	1,375.00	1,042.00	691.00	727.00	4,296.00	55.0%	902.33
Operations, Maintenance and Debt Servic	674.00	673.00	594.00	601.00	658.00	3,200.00	40.9%	671.44
total, existing system	1,135.00	2,048.00	1,636.00	1,292.00	1,385.00	7,496.00	95.9%	1,573.77
Expansion Projects	17.00	-	-	33.00	39.00	89.00	1.1%	18.37
Pass-Through	51.00	51.00	47.00	42.00	41.00	232.00	3.0%	48.76
total uses	1,203.00	2,099.00	1,683.00	1,367.00	1,465.00	7,817.00	100.0%	1,640.89
CPI-U at June	261.51	263.88	268.67	274.17	278.80			
Conversion factor for 2020$	1.0796	1.0699	1.0509	1.0298	1.0127			

Source: PNB Financial Plan, September 2020.

Note 1: Average annual 2020$ is the sum of 2020$ values for each line item over the five-year period, divided by 5. The 2020$ values are calculated as the YOE$ value times the conversion factor. The 2020$ conversion factor is the ratio of the June 2020 CPI (282.33) to the CPI for each year.

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Appendix G: Financial Management Metrics, 2015--2019

APPENDIX G:
Financial Management Metrics

$millions unless otherwise noted	2015	2016	2017	2018	2019	trend, 2015-2019 change	%-change	CAGR
LIQUIDITY								
Current Assets	743.2	723.5	547.9	863.6	591.1	(152.1)	-20.5%	-5.6%
Current Liabilities	919.1	896.8	622.7	929.4	659.0	(260.1)	-28.3%	-8.0%
Working Capital [1]	(175.9)	(173.3)	(74.8)	(65.8)	(67.9)	108.0	-61.4%	-21.2%
as weeks of operating expense	(4.6)	(3.8)	(1.7)	(1.5)	(1.5)	3.2	-68.2%	-24.9%
Current Ratio [2]	0.81	0.81	0.88	0.93	0.90	0.09	10.9%	2.6%
DEBT								
Notes payable	1,281.2	1,105.2	1,084.8	966.1	842.6	(438.6)	-34.2%	-9.9%
Obligations under capital leases	571.3	523.5	297.8	280.7	227.1	(344.2)	-60.2%	-20.6%
Revolving line of credit	-	200.0	75.0	75.0	115.0	na	na	na
total debt obligations	1,852.5	1,828.7	1,457.6	1,321.8	1,184.7	(667.8)	-36.0%	-10.6%
debt as %of net capital investment	32.5%	34.1%	27.4%	24.9%	22.0%	-10.5%	na	na

Source: NJT Comprehensive Annual Financial Reports.

Notes:

1. Working Capital is Current Assets minus Current Liabilities.
2. Current Ratio is Current Assets divided by Current Liabilities.
3. Net capital investment is total cost of capital assets, net of depreciation, minus outstanding debt.
4. See report text for a description of pledged revenues; these vary per credit.

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Appendix H: 20-Year Financial Plan

APPENDIX H:
20-Year Financial Plan

YOE $millions

	2020	2021	2022	2023	2024	2025	2026	2027
OPERATING PLAN								
Operating Revenue								
Passenger Fare Revenue	985.8	374.6	956.2	1,153.3	1,155.7	1,362.4	1,580.2	1,593.9
Other Operating Revenue	117.5	82.0	117.5	118.7	121.0	124.7	128.4	132.3
total operating revenue	1,103.3	456.6	1,073.7	1,272.0	1,276.7	1,487.1	1,708.6	1,726.2
Operating Cost	(2,391.0)	(2,637.0)	(2,681.1)	(2,760.5)	(2,842.4)	(2,927.0)	(3,014.2)	(3,104.2)
Net Operating Income (subsidy)	(1,287.7)	(2,180.4)	(1,607.4)	(1,488.5)	(1,565.7)	(1,439.9)	(1,305.6)	(1,378.0)
Sources of Operating Subsidy								
State of New Jersey								
State Operating Assistance	668.6	597.2	868.2	918.2	933.2	948.2	963.2	978.2
Other State Reimbursements	136.2	145.2	146.7	148.1	149.6	151.1	152.6	154.1
State Capital Transfers	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8
total State subsidies	903.6	841.2	1,113.6	1,165.1	1,181.6	1,198.1	1,214.6	1,231.1
Federal								
Federal Capital Transfers	362.0	362.0	362.0	362.0	362.0	362.0	362.0	362.0
Other Federal Reimbursements	22.1	977.2	143.2	22.1	22.1	22.1	22.1	22.1
total Federal funds	384.1	1,339.2	505.2	384.1	384.1	384.1	384.1	384.1
total operating subsidies	1,287.7	2,180.4	1,618.8	1,549.2	1,565.7	1,582.2	1,598.7	1,615.2
Annual surplus (loss)	-	-	11.4	60.7	(0.0)	142.3	293.1	237.2
CAPITAL PLAN								
Sources of Funds								
Federal								
FTA Formula Funds	527.5	548.3	548.3	548.3	550.3	548.3	548.3	548.3
Flexible Funds (CMAQ, STBGP)	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
total Federal funds	603.5	624.3	624.3	624.3	626.3	624.3	624.3	624.3
State & Other Local Funds								
NJTTF	760.0	760.0	760.0	760.0	760.0	767.0	767.0	767.0
NJTA	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Other	34.0	25.2	25.2	25.2	25.2	25.2	25.2	25.2
total State & Other Local funds	819.0	810.2	810.2	810.2	810.2	817.2	817.2	817.2
total sources	1,422.5	1,434.5	1,434.5	1,434.5	1,436.5	1,441.5	1,441.5	1,441.5
Uses of Funds								
On Going Programs	745.0	755.2	769.6	830.4	826.6	820.5	820.4	828.5
Resiliency	389.2	430.8	312.0	164.1	-	-	-	-
Construction Projects	203.6	73.0	49.3	154.4	120.3	128.3	128.3	120.3
Rolling Stock	335.0	479.6	628.6	638.8	683.7	688.8	688.7	688.7
Portal North Bridge Project	4.9	-	54.7	36.8	36.8	86.8	36.8	40.4
total uses	1,677.6	1,738.6	1,814.1	1,824.5	1,667.4	1,724.2	1,674.2	1,677.9
Annual surplus (deficit)	(255.2)	(304.2)	(379.5)	(390.0)	(230.9)	(282.7)	(232.7)	(236.3)
Beginning Balance	7,004.5	6,749.3	6,445.1	6,065.6	5,675.6	5,444.7	5,162.0	4,929.3
Ending Balance	6,749.3	6,445.1	6,065.6	5,675.6	5,444.7	5,162.0	4,929.3	4,693.0
CPI-U	282.3	289.9	297.4	304.9	312.6	320.1	327.4	335.0
Conversion factor, 2020$	1.000	0.974	0.949	0.926	0.903	0.882	0.862	0.843

Source PNB Project Financial Plan, Sept., 2020

APPENDIX H:
20-Year Financial Plan

YOE $millions

	2028	2029	2030	2031	2032	2033	2034	2035
OPERATING PLAN								
Operating Revenue								
Passenger Fare Revenue	1,607.9	1,622.0	1,853.7	2,089.2	2,107.4	2,125.8	2,144.4	2,450.7
Other Operating Revenue	136.2	140.3	144.5	148.9	153.3	157.9	162.7	167.6
total operating revenue	1,744.1	1,762.3	1,998.2	2,238.1	2,260.7	2,283.7	2,307.1	2,618.2
Operating Cost	(3,197.1)	(3,292.9)	(3,391.8)	(3,493.9)	(3,599.3)	(3,708.0)	(3,820.3)	(3,936.2)
Net Operating Income (subsidy)	(1,452.9)	(1,530.6)	(1,393.6)	(1,255.9)	(1,338.6)	(1,424.3)	(1,513.2)	(1,317.9)
Sources of Operating Subsidy								
State of New Jersey								
State Operating Assistance	993.2	993.2	993.2	993.2	993.2	993.2	993.2	993.2
Other State Reimbursements	155.7	157.2	158.8	160.4	162.0	163.6	165.3	166.9
State Capital Transfers	98.8	98.8	98.8	98.8	98.8	98.8	98.8	98.8
total State subsidies	1,247.7	1,249.2	1,250.8	1,252.4	1,254.0	1,255.6	1,257.2	1,258.9
Federal								
Federal Capital Transfers	362.0	362.0	362.0	362.0	362.0	362.0	362.0	362.0
Other Federal Reimbursements	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
total Federal funds	384.1	384.1	384.1	384.1	384.1	384.1	384.1	384.1
total operating subsidies	1,631.8	1,633.3	1,634.9	1,636.5	1,638.1	1,639.7	1,641.3	1,643.0
Annual surplus (loss)	178.8	102.7	241.3	380.6	299.5	215.4	128.1	325.1
CAPITAL PLAN								
Sources of Funds								
Federal								
FTA Formula Funds	548.3	548.3	548.3	562.0	562.0	562.0	562.0	562.0
Flexible Funds (CMAQ, STBGP)	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0
total Federal funds	624.3	624.3	624.3	638.0	638.0	638.0	638.0	638.0
State & Other Local Funds								
NJTTF	767.0	767.0	767.0	786.2	786.2	786.2	805.8	805.8
NJTA	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Other	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
total State & Other Local funds	817.2	817.2	817.2	836.4	836.4	836.4	856.0	856.0
total sources	1,441.5	1,441.5	1,441.5	1,474.4	1,474.4	1,474.4	1,494.1	1,494.1
Uses of Funds								
On Going Programs	831.5	831.5	831.5	831.5	831.5	831.5	831.5	831.5
Resiliency	-	-	-	-	-	-	-	-
Construction Projects	120.3	120.3	120.3	120.3	120.3	120.3	120.3	120.3
Rolling Stock	685.7	685.7	685.7	685.7	685.7	685.7	685.7	685.7
Portal North Bridge Project	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
total uses	1,674.3	1,674.3	1,674.3	1,674.3	1,674.3	1,674.3	1,674.3	1,674.3
Annual surplus (deficit)	(232.8)	(232.8)	(232.8)	(199.9)	(199.9)	(199.9)	(180.2)	(180.2)
Beginning Balance	4,693.0	4,460.2	4,227.5	3,994.7	3,794.8	3,594.9	3,395.0	3,214.8
Ending Balance	4,460.2	4,227.5	3,994.7	3,794.8	3,594.9	3,395.0	3,214.8	3,034.6
CPI-U	342.6	350.4	358.5	366.9	375.4	384.2	393.3	402.5
Conversion factor, 2020$	0.824	0.806	0.788	0.770	0.752	0.735	0.718	0.701

Source: PNB Project Financial Plan, Sept., 2020

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APPENDIX H:
20-Year Financial Plan

YOE $millions

	2036	2037	2038	2039	Total	CAGR	2020$ avg
OPERATING PLAN							
Operating Revenue							
Passenger Fare Revenue	2,767.1	2,796.3	2,825.9	2,856.0	36,408.1	5.8%	1,391.2
Other Operating Revenue	172.6	177.8	183.1	188.6	2,875.6	2.5%	112.9
total operating revenue	2,939.7	2,974.0	3,009.0	3,044.6	39,283.8	5.5%	1,504.0
Operating Cost	(4,055.7)	(4,179.2)	(4,306.6)	(4,438.2)	(67,776.7)	3.3%	(2,661.9)
Net Operating Income (subsidy)	(1,116.1)	(1,205.2)	(1,297.7)	(1,393.6)	(28,492.9)	0.4%	(1,157.8)
Sources of Operating Subsidy							
State of New Jersey							
State Operating Assistance	993.2	993.2	993.2	994.2	18,794.1	2.1%	747.0
Other State Reimbursements	168.6	170.3	172.0	173.7	3,157.9	1.3%	125.9
State Capital Transfers	98.8	98.8	98.8	98.8	1,976.0	0.0%	79.4
total State subsidies	1,260.6	1,262.2	1,263.9	1,266.7	23,928.1	1.8%	952.4
Federal							
Federal Capital Transfers	362.0	362.0	362.0	362.0	7,240.0	0.0%	291.1
Other Federal Reimbursements	22.1	22.1	22.1	22.1	1,518.2	0.0%	70.0
total Federal funds	384.1	384.1	384.1	384.1	8,758.2	0.0%	361.1
total operating subsidies	1,644.7	1,646.3	1,648.0	1,650.8	32,686.3	1.3%	1,313.5
Annual surplus (loss)	528.6	441.2	350.4	257.1	4,193.4	na	155.6
CAPITAL PLAN							
Sources of Funds							
Federal							
FTA Formula Funds	576.1	576.1	576.1	576.1	11,127.1	0.5%	446.1
Flexible Funds (CMAQ, STBGP)	76.0	76.0	76.0	76.0	1,520.0	0.0%	61.1
total Federal funds	652.1	652.1	652.1	652.1	12,647.1	0.4%	507.2
State & Other Local Funds							
NJTTF	805.8	805.8	805.8	826.0	15,615.6	0.4%	625.7
NJTA	25.0	25.0	25.0	25.0	500.0	0.0%	20.1
Other	25.2	25.2	25.2	25.2	513.1	-1.6%	20.7
total State & Other Local funds	856.0	856.0	856.0	876.2	16,628.8	0.4%	666.5
total sources	1,508.1	1,508.1	1,508.1	1,528.3	29,275.9	0.4%	1,173.7
Uses of Funds							
On Going Programs	831.5	831.5	831.5	831.5	16,373.7	0.6%	656.2
Resiliency	-	-	-	-	1,296.1	-100.0%	62.8
Construction Projects	120.3	120.3	120.3	120.3	2,420.3	-2.7%	97.5
Rolling Stock	685.7	685.7	685.7	685.7	13,061.0	3.8%	519.2
Portal North Bridge Project	36.8	36.8	36.8	36.8	739.3	11.2%	29.4
total uses	1,674.3	1,674.3	1,674.3	1,674.3	33,890.3	0.0%	1,365.1
Annual surplus (deficit)	(166.2)	(166.2)	(166.2)	(146.0)	(4,614.5)	na	na
Beginning Balance	3,034.6	2,868.4	2,702.2	2,536.1	7,004.5	na	na
Ending Balance	2,868.4	2,702.2	2,536.1	2,390.0	2,390.0	na	na
CPI-U	412.0	421.7	431.7	442.1	na	2.4%	na
Conversion factor, 2020$	0.685	0.670	0.654	0.639	na	na	na

Source: PNB Project Financial Plan, Sept., 2020

GEOGRAPHIC LOCATION	TOTAL Section 5309 Major Cap. Invest Amount	FY 2013 and prior	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	TOTAL Appropriated FY 20 & Prior with ARRA/2012 Bus	Remaining New and Small Starts Funding Required Post FY 2020	FY 2021 Attachment 6	FY 2022 Attachment 6	FY 2023 Attachment 6	FY 2024 Attachment 6	FY 2025 Attachment 6	FY 2026 and Beyond Attachment 6	Accumulated Shortfall/ (Advance)
TEA-21 FFGAs																		
Subtotal TEA-21 FFGAs	6020.11	6029.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6029.51	0.00	0.00	0.00	0.00	0.00	0.00		0.00
SAFETEA-LU FFGAs																		
Subtotal SAFETEA-LU FFGAs	13338.22	10340.85	1195.18	726.65	400.00	350.00	260.68	65.66	0.00	13339.03	0.00	0.00	0.00	0.00	0.00	0.00		(0.00)
MAP-21/FAST FFGAs																		
San Francisco - Third Street Light Rail-Central Subway Project	942.20	319.18	150.00	150.00	150.00	150.00	23.02	0.00	0.00	942.20	0.00						0.00	0.00
City of Charlotte, Blue Line Extension-Northeast Corridor	580.04	105.81	100.00	100.00	100.00	100.00	74.23	0.00	0.00	580.04	0.00						0.00	(0.00)
Honolulu - High Capacity Transit Corridor	1550.00	556.27	250.00	250.00	250.00	243.73	0.00	0.00	0.00	1550.00	0.00						0.00	0.00
Sacramento - South Corridor Phase II	135.00	132.49	2.51	0.00	0.00	0.00	0.00	0.00	0.00	135.00	0.00						0.00	0.00
Los Angeles, Regional Connector Transit Corridor Project	669.90	0.00	65.00	100.00	100.00	100.00	100.00	130.01	74.89	669.90	0.00						0.00	0.00
Los Angeles, Westside Purple Line Extension Section 1	1250.00	0.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	665.00	585.00	100.00	100.00	100.00	100.00	100.00	85.00	0.00
Boston, Cambridge to Medford - Green Line Extension	996.12	0.00	0.00	100.00	150.00	150.00	150.00	150.00	150.00	850.00	146.12	100.00	46.12				0.00	0.00
Orlando, Central Florida Commuter Rail Transit Phase 2 South	93.43	2.43	0.00	63.22	11.73	16.06	0.00	0.00	0.00	93.44	0.00						0.00	(0.00)
San Diego, California, Mid-Coast Light Rail Extension	1043.38	0.00	0.00	0.00	100.00	50.00	180.02	100.00	100.00	530.02	513.36	100.00	100.00	100.00	100.00	100.00	18.38	(5.02)
Fort Worth TEX Rail	499.39	4.00	0.00	50.00	100.00	100.00	100.00	100.00	20.39	474.39	25.00						0.00	25.00
Los Angeles, Westside Purple Line Extension Section 2	1187.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00	500.00	687.00	100.00	100.00	100.00	100.00	100.00	187.00	0.00
Maryland National Capital Purple Line	900.00	3.00	0.00	100.00	100.00	125.00	120.00	120.00	120.00	688.00	212.00	120.00	92.00				0.00	0.00
Santa Ana and Garden Grove Streetcar	148.96	0.00	0.00	0.00	0.00	50.00	98.96	0.00	0.00	148.96	0.00						0.00	0.00
Seattle, Lynnwood Link Extension	1172.73	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	400.00	772.73	100.00	100.00	100.00	100.00	100.00	272.73	0.00
Seattle, Federal Way Light Rail Project	790.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	200.00	590.00	100.00	100.00	100.00	100.00	100.00	90.00	0.00
Los Angeles, Westside Purple Line Extension Section 3	1300.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	300.00	1000.00	100.00	100.00	100.00	100.00	100.00	500.00	0.00
Minneapolis Southwest LRT	928.84	0.00	0.00	0.00	5.00	10.00	0.00	0.00	0.00	15.00	913.84	100.00	100.00	100.00	100.00	100.00	313.84	100.00
Lake County, West Lake Corridor	354.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	254.57	100.00	100.00	54.57				0.00
SUBTOTAL- MAP-21/FAST FFGAs	14541.57	1123.18	632.51	1013.22	1266.73	1394.79	1246.23	1100.01	1065.28	8841.95	5699.62	1020.00	938.12	754.57	700.00	700.00	1466.95	119.98
CORE CAPACITY FFGAs																		
Chicago - Red and Purple Modernization Phase 1	956.61	0.00	35.00	0.00	156.13	100.00	200.00	100.00	0.00	591.13	365.48	100.00	100.00	100.00	40.48		0.00	25.00
San Carlos, Caltrain Peninsula Corridor Electrification Project	647.00	0.00	0.00	0.00	72.96	100.00	200.00	100.00	0.00	472.96	174.04	100.00	74.04				0.00	0.00
Dallas DART Red and Blue Line Platform Extensions	60.76	0.00	0.00	0.00	9.59	49.17	2.00	0.00	0.00	60.76	0.00						0.00	0.00
San Francisco, Transbay Corridor Core Capacity	1169.00	0.00	0.00	0.00	0.00	0.00	300.00	0.00	0.00	300.00	869.00	225.00	144.00				0.00	500.00
SUBTOTAL- CORE CAPACITY FFGAs	2833.37	0.00	35.00	0.00	238.68	249.17	702.00	200.00	0.00	1424.85	1408.52	425.00	318.04	100.00	40.48	0.00	0.00	525.00
SUBTOTAL UNDER FFGAs	36733.27		1862.69	1739.88	1905.41	1993.96	2208.91	1365.67	1065.28	29635.34	7108.14	1445.00	1256.16	854.57	740.48	700.00	1466.95	644.98
FFGAs APPROPRIATED FUNDING																		
Phoenix, Valley Metro South Central Light Rail Extension	529.83	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	200.00	329.83							
Kansas City, Streetcar Main Street Extension	174.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.80	50.80	123.26							
Phoenix, Northwest Extension Phase II	158.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60	50.60	107.50							
Gary, Double Track Northwest Indiana	172.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.60	50.60	122.36							
SUBTOTAL - FFGAs APPROPRIATED FUNDING	1034.95	0.00	0.00	0.00	0.00	0.00	0.00	100.00	252.00	352.00	682.95							
CORE CAPACITY FFGAs APPROPRIATED FUNDING																		
New York Canarsie Power Improvements	100.00	0.00	0.00	0.00	16.32	83.68	0.00	0.00	0.00	100.00	0.00							
Hudson County, Portal North Bridge Project	766.50	0.00	0.00	0.00	0.00	0.00	13.70	234.30	0.00	248.00	518.50		125.00	100.00	100.00	100.00	93.50	0.00
SUBTOTAL-CORE CAPACITY FFGAs APPROPRIATED FUNDING	866.50	0.00	0.00	0.00	16.32	83.68	13.70	234.30	0.00	348.00	518.50	0.00	125.00	100.00	100.00	100.00	93.50	0.00
SAFETEA-LU PCGAs AND AWARDED SINGLE YEAR GRANTS																		
SUBTOTAL- SAFETEA-LU PCGAs AND AWARDED SINGLE YEAR GRANTS	594.96	594.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	594.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAP-21/FAST SSGA AND AWARDED SINGLE YEAR GRANTS																		
Mesa, Central Mesa LRT Extension	75.00	54.38	20.62	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Grand Rapids, Silver Line BRT	27.64	23.17	4.47	0.00	0.00	0.00	0.00	0.00	0.00	27.64	0.00							(0.00)
New York City, Norstrand Ave BRT	28.40	28.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.40	0.00							0.00
Riverside-Perris Valley Line	75.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Oakland East Bay BRT	75.00	47.41	0.00	27.59	0.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Jacksonville, JTA BRT North Corridor	26.59	7.71	18.88	0.00	0.00	0.00	0.00	0.00	0.00	26.59	0.00							0.00
Fresno, Fresno Area Express Blackstone/King Canyon BRT	39.49	17.80	10.00	0.66	11.02	0.00	0.00	0.00	0.00	39.49	0.00							0.00
Eugene, West Eugene Emerald Express (WEEE)	75.00	0.00	24.42	50.58	0.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Vancouver, C-TRAN Fourth Plain Bus Rapid Transit	38.50	0.00	0.00	38.50	0.00	0.00	0.00	0.00	0.00	38.50	**0.00**							0.00
El Paso, Dyer Corridor	20.40	0.00	15.24	5.16	0.00	0.00	0.00	0.00	0.00	20.40	0.00							0.00
Denver Southeast Extension	92.00	0.00	0.00	0.00	92.00	0.00	0.00	0.00	0.00	92.00	0.00							0.00
Columbus COTA Cleveland Avenue BRT Project	37.45	0.00	0.00	0.00	37.45	0.00	0.00	0.00	0.00	37.45	0.00							0.00
Jacksonville, Southeast Corridor BRT	19.10	0.00	19.10	0.00	0.00	0.00	0.00	0.00	0.00	19.10	0.00							0.00
Charlotte CityLYNX Gold Line Phase 2	75.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
San Francisco, Van Ness Avenue BRT	75.00	45.40	0.00	0.00	29.60	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Reno 4th St/Prater Way Corridor	6.47	0.00	0.00	0.00	6.47	0.00	0.00	0.00	0.00	6.47	0.00							0.00
Provo Orem BRT	75.00	4.02	0.00	0.00	70.98	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Fort Lauderdale, Wave Streetcar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00
Grand Rapids, Laker Line BRT	56.19	0.00	0.00	0.00	0.00	56.81	0.00	0.00	0.00	56.81	-0.62							(0.62)
Jacksonville, First Coast Flyer East Corridor BRT	16.93	0.00	0.00	0.00	0.00	16.93	0.00	0.00	0.00	16.93	0.00							0.00
San Raphael, SMART San Raphael to Larkspur Regional Connection	22.53	2.50	0.00	0.00	20.03	0.00	0.00	0.00	0.00	22.53	0.00							0.00
Kansas City, Propsect MAX	29.89	0.00	0.00	0.00	0.00	29.89	0.00	0.00	0.00	29.89	0.00							0.00
Everett, Swift II BRT	43.19	0.00	0.00	0.00	0.00	43.19	0.00	0.00	0.00	43.19	0.00							0.00
Tacoma, Tacoma Link Extension	75.00	0.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	75.00	0.00							0.00
Indianapolis, IndyGo Red Line Rapid Transit Project	74.99	0.00	0.00	0.00	0.00	50.00	24.99	0.00	0.00	74.99	0.00							0.00
Albuquerque, Rapid Transit Project	75.04	0.00	0.00	0.00	0.00	50.00	25.04	0.00	0.00	75.04	0.00							0.00
Minneapolis, Metro Orange Line BRT	74.08	0.00	0.00	0.00	0.00	0.00	74.08	0.00	0.00	74.08	0.00							0.00
Tempe, Tempe Streetcar	75.00	0.00	0.00	0.00	0.00	50.00	25.00	0.00	0.00	75.00	0.00							0.00
Reno, Virginia Street BRT Extension	40.39	0.00	0.00	0.00	0.00	0.00	40.39	0.00	0.00	40.39	0.00							0.00
Spokane, Central City Line BRT	53.43	0.00	0.00	0.00	0.00	0.00	53.43	0.00	0.00	53.43	0.00							0.00
Portland, Division Transit Project BRT	87.42	0.00	0.00	0.00	0.00	0.00	87.42	0.00	0.00	87.42	0.00							0.00
Jacksonville, Southwest Corridor BRT	16.60	0.00	0.00	0.00	0.00	0.00	16.60	0.00	0.00	16.60	0.00							0.00
Albany, River Corridor/Blue Line BRT	26.92	0.00	0.00	0.00	0.00	0.00	26.92	0.00	0.00	26.92	0.00							0.00
El Paso Montana Corridor BRT	28.22	0.00	0.00	0.00	28.22	0.00	0.00	0.00	0.00	28.22	0.00							0.00
St. Petersburg, Central Avenue BRT	21.84	0.00	0.00	0.00	0.00	0.00	0.00	21.84	0.00	21.84	0.00							
Miami-Dade, South Corridor Rapid Transit Project	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00							
SUBTOTAL- MAP-21/FAST SSGAs AND AWARDED SINGLE YEAR GRANTS	1778.70	305.79	112.73	122.49	445.79	296.82	373.86	121.84	0.00	1779.32	-0.62	0.00	0.00	0.00	0.00	0.00	0.00	(0.62)
SSGAs AND SINGLE YEAR GRANTS APPROPRIATED FUNDING																		
Sacramento, Downtown Riverfront Streetcar	58.50	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	8.50							
Seattle, Seattle Center City Connector	75.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	50.00	25.00							
Indianapolis, IndyGo Purple Rapid Transit Line	77.50	0.00	0.00	0.00	0.00	0.00	27.04	50.46	0.00	77.50	0.00							
Albany, Washington/Western BRT	60.89	0.00	0.00	0.00	0.00	0.00	0.00	60.89	0.00	60.89	0.00							
Ogden, Ogden/Weber State University Bus Rapid Transit	75.07	0.00	0.00	0.00	0.00	0.00	0.00	64.50	0.00	64.50	10.57							
Vancouver, Mill Plain BRT	24.88	0.00	0.00	0.00	0.00	0.00	0.00	24.88	0.00	24.88	0.00							
Milwaukee, East-West BRT	40.93	0.00	0.00	0.00	0.00	0.00	0.00	3.98	36.96	40.93	0.00							
Portland, MAX Red Line Extension and Reliability Improvements	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00							
Pittsburgh, Downtown-Uptown-Oakland-East End BRT	99.95	0.00	0.00	0.00	0.00	0.00	0.00	99.95	0.00	99.95	0.00							
SUBTOTAL-SSGAs AND SINGLE YEAR GRANTS APPROPRIATED FUNDING	612.73	0.00	0.00	0.00	0.00	100.00	27.04	404.66	36.96	568.66	44.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPEDITED DELIVERY PILOT PROGRAM APPROPRIATED FUNDING																		
BART Silicon Valley Phase 2 Project	1395.00	0.00	0.00	0.00	5.00	20.00	0.00	100.00	0.00	125.00	1270.00							
SUBTOTAL-EXPEDITED DELIVERY PILOT PROGRAM APPROPRIATED FUNDING	1395.00	0.00	0.00	0.00	5.00	20.00	0.00	100.00	0.00	125.00	1270.00							
OTHER APPROPRIATIONS																		
SUBTOTAL-OTHER APPROPRIATIONS		512.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	512.64								

	FY 2013 and Prior	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Summary [FY 2005-2020]	FY 2021 Attachment 6	FY 2022 Attachment 6	FY 2023 Attachment 6	FY 2024 Attachment 6	FY 2025 Attachment 6	FY 2026 and Beyond Attachment 6	Shortfall (Advance)	Post 2020 Commitments
Completed ISTEA FFGA Commitments	236.68								**236.68**								
TEA-21 FFGAs	2,991.17								**2,991.17**								
SAFETEA-LU FFGAs	9,736.64	1,195.18	726.65	400.00	350.00	260.68	65.66	0.00	**12,734.82**	-						(0.00)	(0.00)
MAP-21/FAST FFGAs	1,112.84	632.51	1013.22	1266.73	1394.79	1246.23	1100.01	1065.28	**8,831.61**	1,020.00	938.12	754.57	700.00	700.00	1,466.95	119.98	5,699.62
Core Capacity FFGA	-	35.00	0.00	238.68	249.17	702.00	200.00	0.00	**1,424.85**	425.00	318.04	100.00	40.48	-	-	525.00	1,408.52
FFGAs Appropriated Funding	-	-	0.00	0.00	0.00	0.00	100.00	252.00	**352.00**								-
Core Capacity FFGAs Appropriated Funding	-	-	0.00	16.32	83.68	13.70	234.30	0.00	**348.00**								-
Oversight Takedown	160.27	19.43	21.20	21.77	25.00	26.50	25.52	19.78	**319.46**								-
Capital Projects - Alaska and/or Hawaii [SAFETEA-LU Mandated]	114.73	-	0.00	0.00	0.00	0.00	0.00	0.00	**114.73**								-
Capital Projects - Denali Commision	34.84	-	0.00	0.00	0.00	0.00	0.00	0.00	**34.84**								-
SAFETEA-LU PCGAs and SINGLE YEAR Grants	543.91	-	0.00	0.00	0.00	0.00	0.00	0.00	**543.91**								-
MAP-21/FAST SSGAs and SINGLE YEAR Grants	213.66	112.73	122.49	445.79	296.82	373.86	121.84	0.00	**1,687.19**	-						-	-
SSGAs and SINGLE YEAR Grants Appropriated Funding	-	-	0.00	0.00	100.00	27.04	404.66	36.96	**568.66**								-
Other Appropriations [2]	488.07	-	0.00	0.00	0.00	0.00	0.00	0.00	**488.07**								-
Expedited Delivery Pilot Program	-			5.00	20.00	0.00	100.00	0.00	**125.00**								-
Reallocated Funds [3]	-								**-**								-
Unallocated	-					0.00	200.70	603.98	**804.68**								-
Total	15,632.81	**1,994.85**	**1883.57**	**2394.29**	**2519.46**	**2650.01**	**2552.69**	**1978.00**	**31,605.67**	**1,445.00**	**1,256.16**	**854.57**	**740.48**	**700.00**	**1,466.95**	**644.98**	**7,108.14**